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Environmental Assessment

Ekalaka - Alzada

Project Number PLH323-1(11)25
Control Number 4138

Prepared for:
Montana Department of Transportation
Federal Highway Administration

Prepared by: Kadrmas, Lee & Jackson, P.C.

March 2001

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For

Ekalaka – Alzada
PLH323-1(11)25 Control Number 4138

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And Sections 2-3-104, 75-1-201 M.C.A.
By the
U.S. Department of Transportation
Federal Highway Administration
And the
Montana Department of Transportation

Submitted By:

Montana Department of Transportation
Environmental Services

Date: February 13, 2001

Reviewed and Approved for Distribution:

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Date: 3/6/01

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Executive Summary

The Montana Department of Transportation (MDT) and Federal Highway Administration (FHWA) are jointly proposing to reconstruct 75.6 km (47 mi.) of Secondary Highway 323 in Carter County between Alzada and 40 km (25 mi.) south of Ekalaka. Design and construction of the 75.6 km is proposed to be completed in segments as funding becomes available.

The existing highway, constructed between 1949 and 1953, consists of a two lane unpaved road with a 6.7 to 7.3 meter-wide (22 to 24 ft) finished gravel surface. The highway alignment primarily traverses flat-to-rolling rangeland containing scattered bluffs and numerous ephemeral drainages. These include Skull Creek, Prairie Dog Creek, Hawksnest Creek, North Butte Creek, Twelvemile Creek, Ninemile Creek, Sevenmile Creek, and Fivemile Creek. The alignment also traverses the Little Missouri River, a perennial drainage. Land use in the project area is agricultural, consisting primarily of grazing and hay land with small areas of cultivated lands. Several unpaved access roads intersect the highway throughout the project length.

The purpose of this project is to completely reconstruct the existing roadway to meet the current design standards for a major collector road. Proposed improvements include a wider typical section, adequate gravel surfacing, flatter inslopes, cut and fill slopes, and flatter curves and grades. The No Action and the Preferred Alternatives are the two alternatives being considered for this project. The No Action Alternative will not remedy any of the existing inadequacies of the present roadway. Under the Preferred Alternative, the road will generally shift 15 meters (49 ft) west of the existing alignment. The proposed road will consist of a two-lane highway with 3.6 m (12 ft) traffic lanes and will be constructed to meet the criteria of a 100 km/hr (65m/h) design speed. It is proposed to have 230 mm of gravel surfacing and a subgrade designed to accommodate a possible future 8.0 m (26.2 ft) paved finished top width. Two major deviations are proposed from the existing horizontal alignment: near Albion and south of Hawksnest Creek.

Rights-of-way width for the Preferred Alternative will generally be 40 meters (131 ft). The Preferred Alternative will require the acquisition of approximately 260 ha (642 acres) of additional land for ROW.

The Preferred Alternative includes replacement of all existing drainage structures except for the bridge over the Little Missouri River, which will be left in place. The existing road has 12 cattle guard crossings. The proposed project calls for elimination of these cattle guards to the extent possible by including additional fencing and stock "underpasses." A determination of the feasibility of removing cattle guards will be made during the detailed design engineering for each segment.

A cultural resource inventory, biological resource report, and a vascular plant survey were conducted in the project area in 2000. These reports indicate that the Preferred Alternative would have minimal impact to the area. The construction of the Preferred Alternative would impact approximately 3.4 ha (8.4 acres) of Category III and IV wetlands. During the detailed design engineering for each segment, potential impacts to wetlands will be reevaluated.

The proposed improvements to this roadway will improve transportation of farm-to-market goods, delivery of goods and services to local farms and communities, and safety to the motoring public.

Table I. Summary of Impacts and Mitigation

Category	No Action Alternative	Preferred Alternative	Proposed Mitigations
Land Use	No Impact	Improvement to local access	No Mitigation
Socioeconomic	Hampered accessibility	Short-term construction impacts. Economic benefit due to construction $.	Public service announcements. Traffic flaggers.
Farmland	No Impact	No Impact	No Mitigation
Cultural	No Impact	No Impact	No Mitigation
Right-of-Way	No Impact	Acquisition of 260 ha (642 acres) of ROW.	Avoid relocations.
Air Quality	No Impact	Short-term construction related impacts. No long-term impacts.	Use of BMP's and MDT standards.
Noise	No Impact	Short-term construction related impacts.	Use of BMP's and MDT standards.
Water Quality	No Impact	Increase chance of erosion and slope instability.	Use of BMP's.
Vegetation	No Impact	Disturb current vegetated areas allowing for possible growth of noxious weeds.	Limit time of exposure of bare ground. Wash equipment and spot spray to reduce noxious weeds.
Wetlands	No Impact	Project will impact approximately 3.4 ha (8.4 acres) of wetland.	Avoid wetlands and compensate for unavoidable impacts.
Wildlife & Fish	No Impact	Impacts to habitat through ROW clearing and fencing.	Confine construction clearing, replace woven fence, and raptor proof overhead power lines.
Endangered or Rare Species	No Impact	No Impact	Raptor-proof overhead utility relocation.
Flood Plains	No Impact	Increased sediment run-off.	Construct road to be stable, well graded, and unaffected by water.
Hazardous Materials	No Impact	No Impact	Coordinate with MDEQ to set up new monitor well, soil sampling protocol, and to minimize excavation of plume.
Visual	No Impact	Impacts from construction activities, road raised, and loss of trees in riparian areas.	Prompt revegatation. Limit clearing in riparian areas.
Construction	No Impact	Traffic delays, noise increase, and airborne dust particles. Access to be maintained during construction. Potential water quality impacts.	Use BMP's to reduce construction impact on area.

Acronyms

BLM	Bureau of Land Management
BMP	Best Management Practices
COE	US Army Corp of Engineers
EA	Environmental Assessment
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
ft	Feet
ha	Hectares
km	Kilometers
km/h	Kilometers per Hour
mi.	Miles
MBDC	Montana Bird Distribution Committee
MDEQ	Montana Department of Environmental Quality
MDFW&P	Montana Department of Fish, Wildlife, and Parks
MDNRC	Montana Department of Natural Resources and Conservation
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MRIS	Montana Rivers Information System
MT	Montana
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
PTW	Presently Traveled Way
ROW	Right-of-Way
SHPO	State Historical Preservation Office
SPA	Stream Preservation Act
STIP	State Transportation Improvement Plan
TMDL	Total Maximum Daily Load
U.S.C.	United States Code
USDA	US Department of Agriculture
USFWS	US Fish and Wildlife Services
UST	Underground Storage Tank

Table of Contents

EXECUTIVE SUMMARY I

TABLE I. SUMMARY OF IMPACTS AND MITIGATION III

ACRONYMS IV

TABLE OF CONTENTS V

LIST OF FIGURES VII

LIST OF TABLES VIII

DISTRIBUTION LIST IX

1.0 PURPOSE AND NEED FOR ACTION 1

- 1.1 STUDY AREA LOCATION AND DESCRIPTION 1
- 1.2 EXISTING ROADWAY DETAILS 4
- 1.3 PREFERRED ALTERNATIVE DESCRIPTION 4
- 1.4 PURPOSE AND NEED 6
- 1.5 EXISTING CONDITIONS 6
  - *1.5.1 Roadway Surfacing* *6*
  - *1.5.2 Roadway Typical Section* *7*
  - *1.5.3 Horizontal Alignment* *7*
  - *1.5.4 Vertical Alignment* *7*
- 1.6 SAFETY AND ACCIDENT DATA 7
- 1.7 ECONOMIC DEVELOPMENT 8
- 1.8 RELATIONSHIP TO TRANSPORTATION PLANNING 8

2.0 ALTERNATIVES CONSIDERED 8

- 2.1 ALTERNATIVES ADVANCED 8
  - *2.1.1 No Action Alternative* *8*
  - *2.1.2 Preferred Alternative* *8*
- 2.2 ALTERNATIVES CONSIDERED, BUT NOT ADVANCED 10

3.0 ENVIRONMENTAL CONSEQUENCES 12

- 3.1 LAND USE, ZONING, AND LAND USE PLANNING 12
  - *3.1.1 Affected Environment* *12*
  - *3.1.2 Land Use Impacts* *12*
  - *3.1.3 Mitigation* *13*
- 3.2 SOCIOECONOMICS 13
  - *3.2.1 Affected Environment* *13*
  - *3.2.2 Impacts* *13*
  - *3.2.3 Mitigation* *13*
- 3.3 PRIME AND UNIQUE FARMLAND 14
  - *3.3.1 Affected Environment* *14*
  - *3.3.2 Prime and Unique Farmland Impact* *14*
  - *3.3.3 Mitigation* *14*

3.4 CULTURAL RESOURCES 14
3.4.1 Affected Environment 14
3.4.2 Cultural Impacts 14
3.4.3 Mitigation 15
3.5 RIGHT-OF-WAY AND RELOCATION 15
3.5.1 Affected Environment 15
3.5.2 Right-of-Way Impacts 15
3.5.3 Mitigation 18
3.6 AIR QUALITY 18
3.6.1 Affected Environment 18
3.6.2 Air Quality Impacts 18
3.6.3 Mitigation 18
3.7 NOISE 18
3.7.1 Affected Environment 18
3.7.2 Noise Impacts 18
3.7.3 Mitigation 19
3.8 WATER QUALITY 19
3.8.1 Affected Environment 19
3.8.2 Water Resource Impacts 19
3.8.3 Mitigation 19
3.9 VEGETATION 19
3.9.1 Affected Environment 19
3.9.2 Vegetation Impacts 20
3.9.3 Mitigation 20
3.10 WETLANDS 20
3.10.1 Affected Area 20
3.10.2 Wetland and Vegetation Impacts 21
3.10.3 Avoidance and Minimization 21
3.10.4 Avoidance and Minimization Measures 22
3.10.5 Wetland and Stream Mitigation 25
3.11 WILDLIFE AND FISH 26
3.11.1 Affected Environment 26
3.11.2 Wildlife and Fisheries Impacts 28
3.11.3 Mitigation 28
3.12 ENDANGERED OR RARE SPECIES 29
3.12.1 Affected Environment 29
3.12.2 Species Impacts 30
3.12.3 Mitigation 30
3.13 FLOODPLAINS 31
3.13.1 Affected Environment 31
3.13.2 Floodplain Impacts 31
3.13.3 Mitigation 31
3.14 HAZARDOUS MATERIALS 32
3.14.1 Affected Environment 32
3.14.2 Hazardous Material Impact 32
3.14.3 Mitigation 34

3.15 VISUAL 34
3.15.1 Affected Environment 34
3.15.2 Visual Impacts 34
3.15.3 Mitigation 35
3.17 CONSTRUCTION AND EROSION CONTROL 35
3.17.1 Impacts 35
3.17.2 Mitigation 35
3.18 SECONDARY AND CUMULATIVE IMPACTS 35
3.19 PERMITS REQUIRED 36

4.0 COMMENTS AND COORDINATION 37

4.1. PUBLIC INVOLVEMENT ACTIVITIES 37
4.2 LIST OF COOPERATING AGENCIES AND AGENCIES WITH JURISDICTION 38
4.3 LIST OF OTHER CONTACTED OR CONTRIBUTING AGENCIES, PERSONS, AND GROUPS 38
4.4 REMAINING PUBLIC INVOLVEMENT 39

5.0 LIST OF PREPARERS 39

5.1 QUALIFICATIONS 39

APPENDIX A

AGENCY COORDINATION LETTERS

APPENDIX B

GENERAL CHARACTERISTICS OF WETLANDS ALONG THE EKALAKA-ALZADA PROJECT

APPENDIX C

WETLANDS MAPS

List of Figures

Figure No.	Title	Section	Page No.
1	Site Location	1.1	2
2	Project Design Phases	1.1	3
3	Proposed Typical Roadway Section	1.3	5
4	Hawksnest Proposed Alignment	1.6	9
5	Cross Country Alternative	2.2	11
6	Albion Proposed Realignment	3.5.1	16
7	Sevenmile Creek Proposed Alignment	3.10.4	24
8	Contamination Plume Location	3.14.2	33

List of Tables

Table No.	Title	Section	Page No.
I	Summary of Impacts and Mitigation	III	III
II	Accident History	1.6	7
III	Wetlands Requiring Special Design Consideration	3.10.3	22
IV	Proposed Realignment Wetlands Impacts Reduction	3.10.4	23
V	Summary of MRIS Ratings for Project Area Streams	3.11.1	27
VI	Threatened or Endangered Species Summary	3.12.1	30
VII	General Characteristics of Wetlands Along the Ekalaka-Alzada Project	Appendix B	B

Distribution List

The following agencies, groups, and individuals are receiving a copy of the Environmental Assessment:

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Ecological Services
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Billings, MT 59101

Bureau of Land Management
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Miles City, MT 59301

Montana Fish Wildlife and Parks
Headquarters Region 7
PO Box 1630
Miles City, MT 59301

1.0 Purpose and Need for Action

1.1 Study Area Location and Description

The project study area is located on Secondary Highway 323 in Carter County, Montana. The project begins 40 km (25 mi.) south of Ekalaka at the end of the pavement and extends south 75.6 km (47 mi.) to the intersection of US Highway 212 at Alzada. The project is located 87 km (54 mi.) east of Broadus, Montana and 92 km (57 mi.) south of Baker, Montana (See Figure 1).

The project area is 75.6 km (47 miles). Secondary Highway 323 is located in rolling-to-level terrain consisting generally of grasslands. Land use along the project is mostly agricultural, consisting of grazing and hay land, with some small areas of cultivated lands. There are some small areas of irrigation along the southern half of the project. Approximately 20.9 km (13 miles) of the existing road crosses land administered by the BLM.

Design and construction for the project is proposed to be accomplished in segments (See Figure 2). These segments will be constructed as funding becomes available. Currently, funding has been secured to do detailed design engineering and construction for the following segments:

- 40 km South of Ekalaka, STPS – 1 ( ) 25
  This segment is currently under design and $5,400,00 has been programmed for design and construction of this segment. Construction is programmed for 2004.

- Alzada-North, PLH 323 – 1 (11) 25
  This segment is currently under design and $2,200,000 has been secured for construction. Construction for this segment is planned for 2001.

- Albion North & South, PLH 323 – 1 (11) 25
  This segment is currently under design and $1,000,000 has been secured for construction of this segment. Allocation of the $1,000,000 to construction of this segment is dependent of construction cost of the Alzada-North phase. Construction on this segment is programmed for 2002.

- Yet To Be Determined
  The "middle" 24.1 km (15 miles) of the project has yet to be programmed and funded.

Figure 1: Site Location

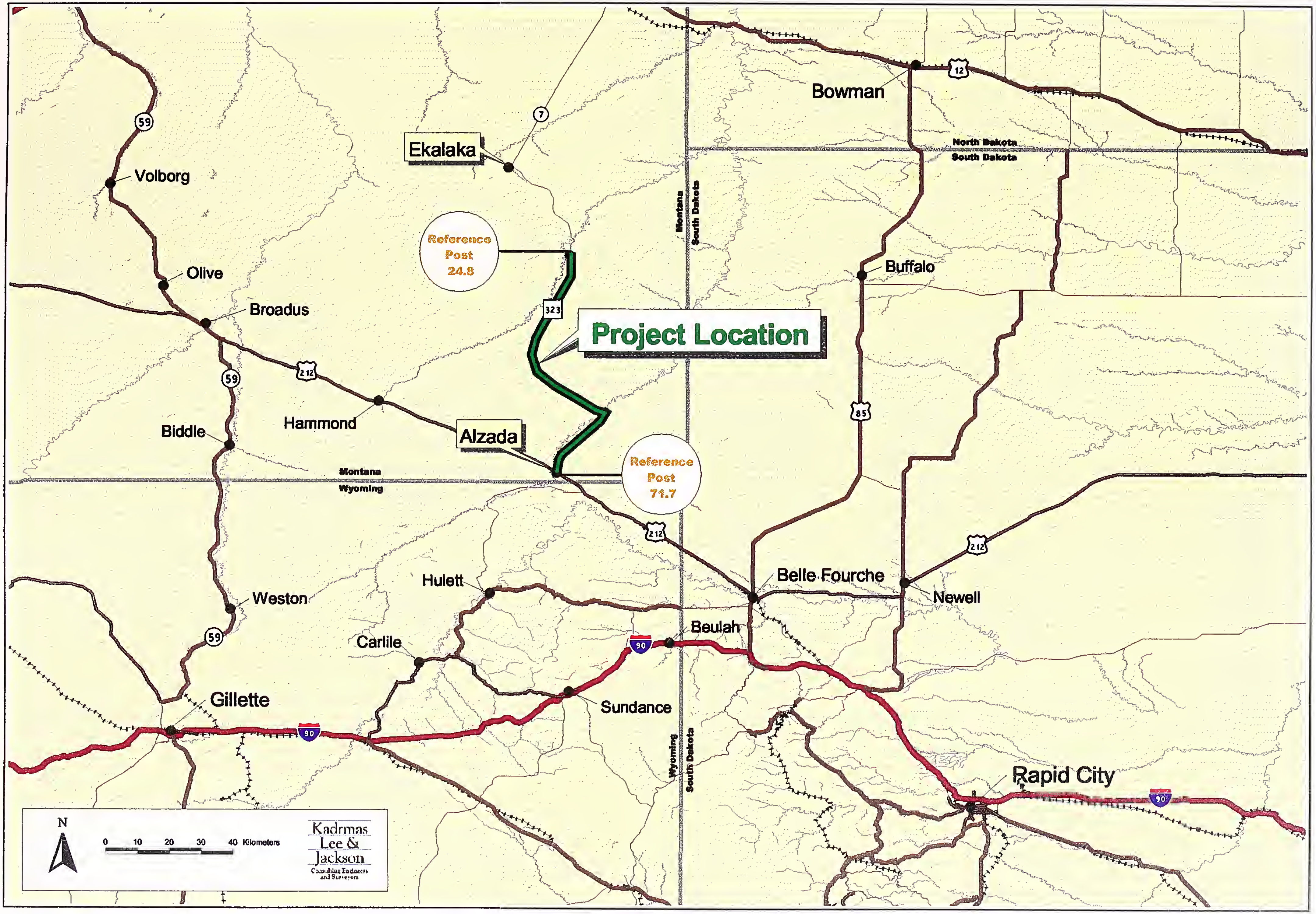
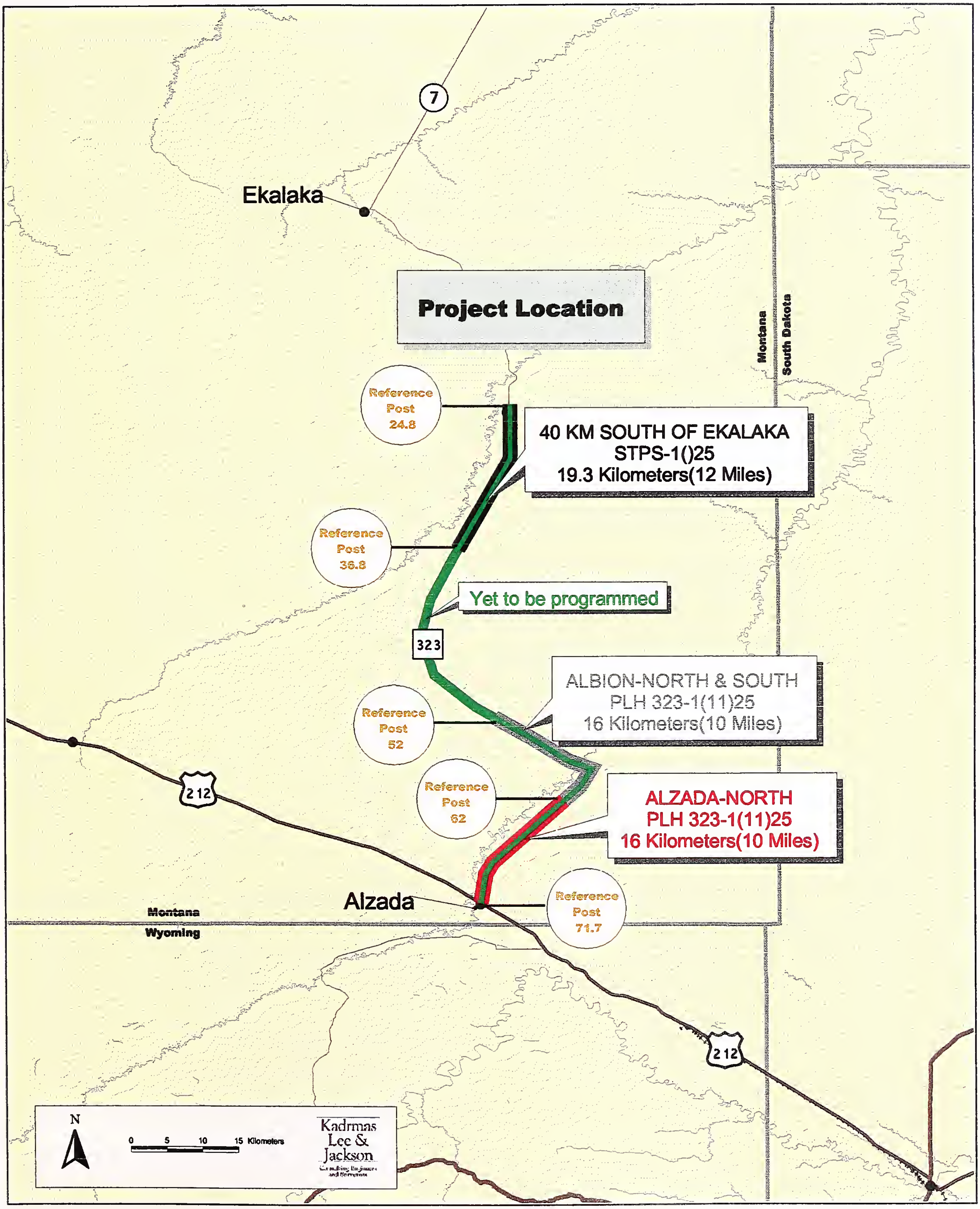


Figure 2: Project Design Phases



1.2 Existing Roadway Details

Secondary Highway 323 is classified as a major collector and is the primary transportation link between Ekalaka and Alzada. It connects to US Highway 212 at Alzada to State Route 7 in Ekalaka.

The existing roadway is a rural two-lane highway with a 6.7 to 7.3 meter-wide (22 to 24 ft) gravel surface. The roadway was constructed in four separate projects between 1949 and 1953. The Carter County maintenance crews have placed gravel surfacing on the roadway periodically since the 1950's, and MDT replaced the bridge over the Little Missouri River in 1983. The existing roadway traverses both BLM and private lands.

1.3 Preferred Alternative Description

The Preferred Alternative consists of a two-lane highway with 3.6 m (12 ft.) traffic lanes and gravel surfacing (See Figure 3). The proposed road will have 230 mm of gravel surfacing and a subgrade designed to accommodate a possible future paved surface of 8.0 m (26.2 ft). The surfacing inslopes will be constructed at a 6:1 slope and the cut slopes will vary depending on the cut depth. Fill slopes will be 4:1.

The horizontal and vertical alignments will be constructed to meet the design criteria for a 100 km/hr (65 mi/hr) design speed. Four percent is the proposed maximum grade. The following alignment modifications are proposed in the Preferred Alternative:

- *RP 25.0 to RP 40.8* – Horizontal alignment will be shifted approximately 15 m (49 ft) to the west to avoid wetlands and utilities.

- *RP 40.8 to RP 42.0* – Two reverse curves will be replaced with one simple curve shifting the alignment to the west.

- *RP 42.0 to RP 46.0* – Horizontal alignment will follow the PTW to avoid impacts to cultivated lands.

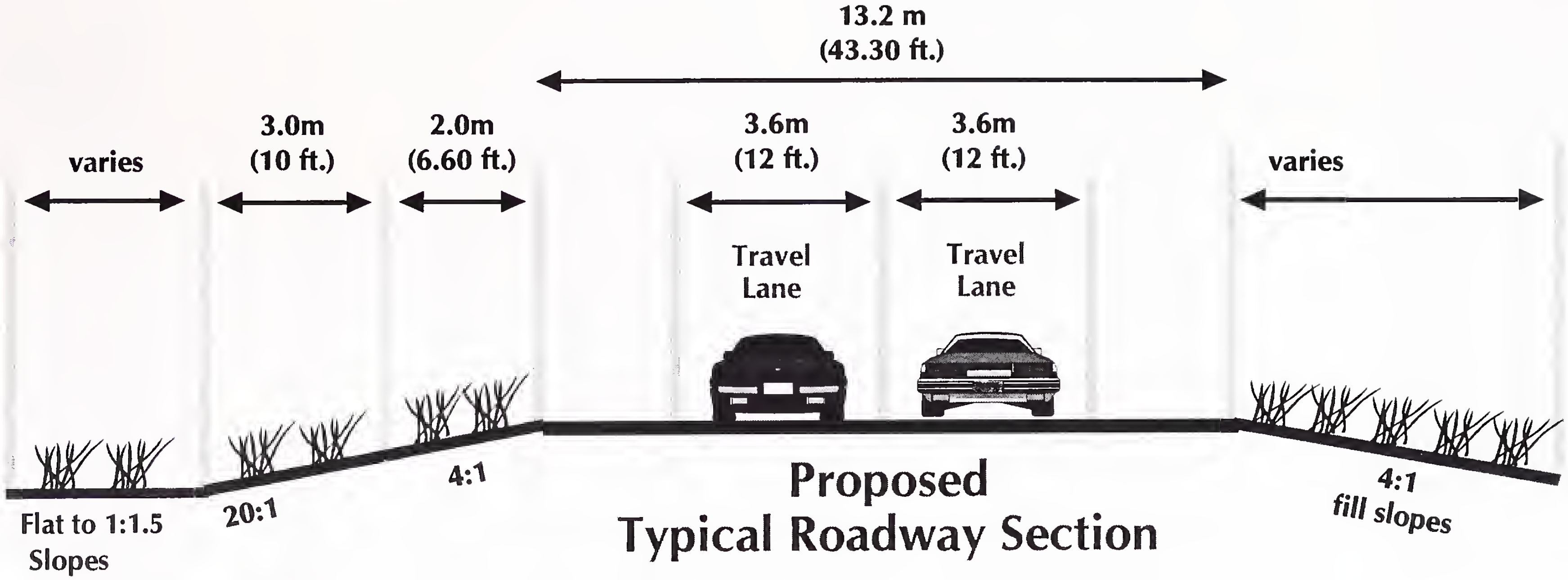
- *RP 46.0 to RP 48.0* – Horizontal alignment will shift to the west, closer to the top of the ridge, to alleviate snow and erosion problems in the area.

- *RP 48.0 to RP 56.5* – Horizontal alignment will follow the PTW to match the existing bridge over the Little Missouri River, which will not be replaced.

- *RP 56.5 to RP 59.5* – A sharp curve will be replaced with a flatter curve, shifting the horizontal alignment west of the school at Albion.

- *RP 59.5 to RP 71.7* – Horizontal alignment will shift 15 m (49 ft) to the west of the PTW.

Figure 3: Proposed Typical Roadway Section



Note: The proposed roadway is designed to accommodate a future paved surface. At this time only a 7.2m (24 ft.) wide gravel surface is proposed.

The existing road has 12 cattle guard crossings. These cattle guards will be eliminated to the extent possible by including additional fencing and stock "underpasses." The final number and location of the stock "underpasses" is dependent on landowner negotiations and will be determined during detailed design engineering for each segment. Other design improvements to the roadway include replacing existing drainage structures and realigning the roadway with US Highway 212 at Alzada.

1.4 Purpose and Need

The primary purpose of the proposed improvement is to provide an all weather roadway for safe and efficient transportation. It will provide the area residents with a safe and efficient means of transporting their farm-to-market goods in and out of the area. This project will enhance the social and economic aspects within the area. The improvement will provide a safe and improved roadway for medical care, shopping, schools, social activities, and the transportation of agricultural products that are of prime importance to the people who use this roadway. This roadway is also a mail and school bus route, as well as a route used by hunters in the fall and winter months.

Reconstructing the roadway was determined necessary to improve the roadway conditions to MDT and FHWA standards. The Preferred Alternative would:

- Reduce maintenance costs by eliminate the need to replace many of the existing culverts and reduce snow removal cost.
- Enhance safety for the traveling public and commercial trucking by providing an all-weather road that has wider and improved driving surface, standard driveway/approach access, and new signing.
- Improve drainage and snow storage by raising the road.
- Improve stopping sight distances by eliminating substandard vertical and horizontal alignments.
- Raise the road, thereby reducing the risk of the road flooding and of closures.

1.5 Existing Conditions

The following sections will explain the existing conditions in detail:

1.5.1 Roadway Surfacing

The surfacing of the roadway consists of gravel. The inadequate amount of gravel on this roadway has caused many problems. Heavy rains cause slippery conditions and extreme rutting, making the roadway almost impassible in some areas. Rough conditions along the roadway cause lower traffic speeds and unsafe conditions for the motoring public.

1.5.2 Roadway Typical Section

The existing roadway has a 6.7 to 7.3 meter-wide (22 to 24 ft) gravel surface. The road width and cut/fill slopes do not meet the design criteria for secondary highways. Inadequate ditch sections cause poor drainage conditions and limited snow storage during the winter months.

1.5.3 Horizontal Alignment

The existing horizontal alignment does not meet the 100 km/h (65 mi./h) design speed. Four curves along the roadway do not meet an 80 km/h (50 mi./h) design speed, and twelve curves do not meet a design speed of 100 km/h (65 mi./h). The super-elevations of these curves have diminished greatly due to settling, travel, and limited maintenance.

1.5.4 Vertical Alignment

The vertical alignment does not meet the design criteria for a 100 km/h (65 mi./h) design speed. Eighteen areas along the roadway exceed the maximum grade of 4 percent. The maximum grades along the project range from 7.70 to 8.50 percent. Some of the vertical curves along the roadway do not meet the design criteria for minimum stopping sight distance. The combination of these steep grades and inadequate vertical curves can create operational and safety concerns.

1.6 Safety and Accident Data

A total of nine accidents was reported in the project area between July 1, 1990 and June 30, 2000. These nine accidents resulted in six injuries and no fatalities. Evaluating accidents for a given roadway involves determining an accident rate, severity index, and severity rate as well as determining whether roadway conditions may be a contributing factor in the accidents or their severity. An accident rate is defined as the number of accidents per million vehicle-miles. The severity index is determined by accounting for the fatalities, injuries, and property damage resulting from the accident. The severity rate is defined as the accident rate multiplied by the severity index.

The accident rates, severity indexes, and severity rates for this project are compared to statewide averages in Table II. below.

TABLE II. Accident History

	Project Area	*Statewide*
Accident Rate	0.59	1.77
Severity Index	3.00	2.50
Severity Rate	1.77	4.43

Note: Accident data is based only on accidents that are reported.

These numbers indicate the accident rate and severity rate for the project area are lower than the statewide averages. However, the severity index is higher than the statewide averages. Most of the accidents occurred between RP 24.8 and RP 52.0. Seven of the nine accidents resulted in a vehicle overturn. All nine accidents involved passenger vehicles. No truck accidents were reported in the project area.

At the November 18, 1999 project public meeting, representatives of the Carter County Commission and Carter County Sheriff's Department testified that the "Hawksnest" area has historically been a high accident area. The existing road through the Hawksnest area has an excessive number of substandard curves. The proposed road realignment through the Hawksnest area would eliminate the substandard curves and bring the road up to MDT and FHWA standards (See Figure 4).

1.7 Economic Development

The economy in the surrounding area is driven strongly by agriculture. Improvement to this roadway will help decrease the cost of shipping farm-to-market goods, provide better services, and promote tourism. It is the main route in the area that connects to US Highway 212.

1.8 Relationship to Transportation Planning

The proposed project is in the State Transportation Improvement Plan (STIP) under Amendment #2 to the 1999-2001 STIP.

2.0 Alternatives Considered

The Preferred Alternative and the No Action Alternative were considered for this project. The next two sections describe the alternatives in more detail.

2.1 Alternatives Advanced

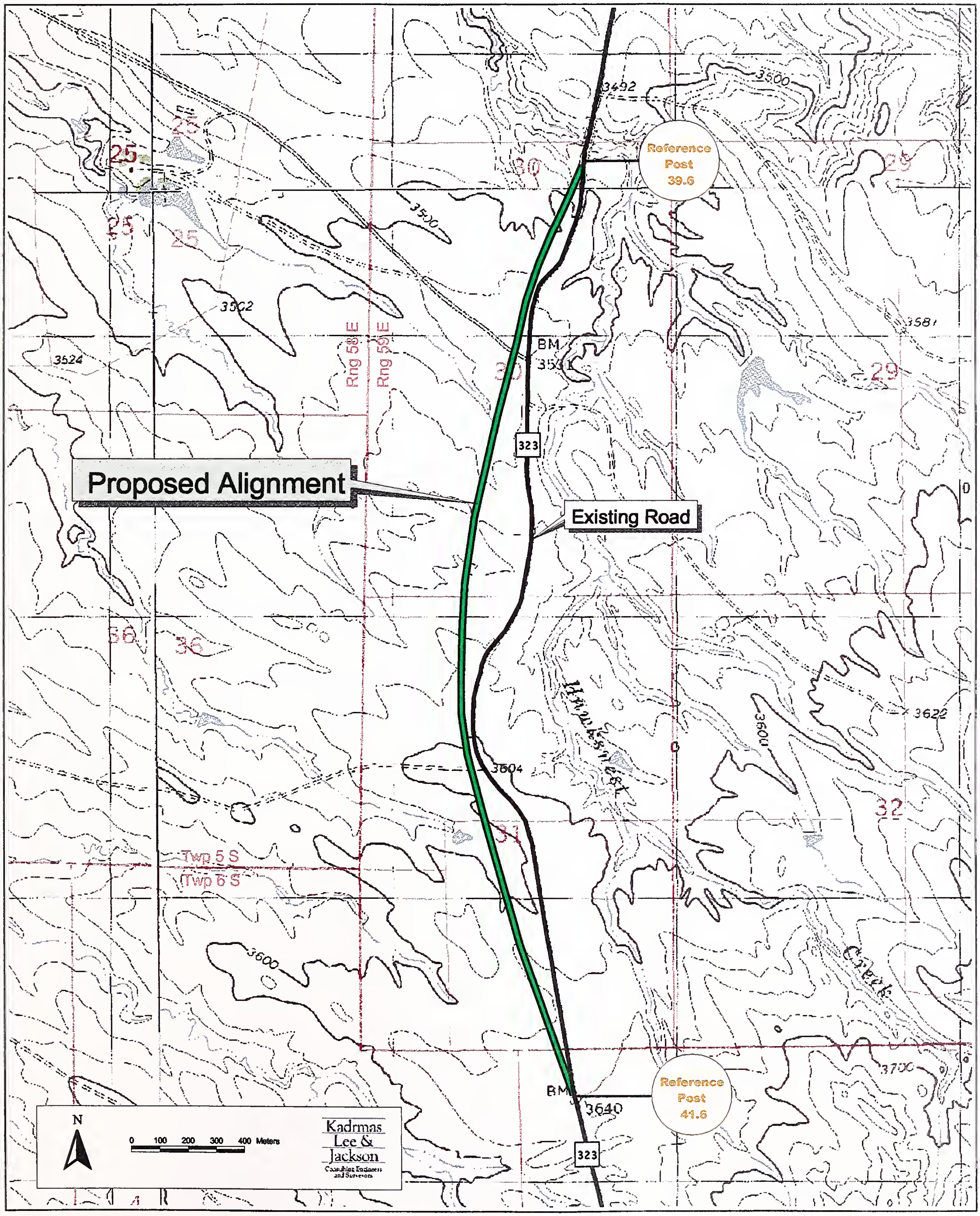
2.1.1 No Action Alternative

This alternative will retain the existing roadway in its present state. No improvements will be made to safety features or maintenance requirements with this alternative.

2.1.2 Preferred Alternative

The Preferred Alternative will be an improved two-lane rural highway with a wider typical section, adequate gravel surfacing, flatter inslopes and cut and fill slopes, and flatter curves and grades. The proposed horizontal alignment generally will shift 15 meters to the west of the existing alignment. A more detailed description of the

Figure 4: Hawksnest Proposed Alignment



proposed alignment is in the Proposed Improvement section. The improved gravel surfacing will increase traffic speeds and improve the ride. The horizontal and vertical alignments will be designed to meet the design criteria of a 100 km/h (65 mi./h) design speed. All these improvements will provide a safer and more efficient means of transportation for the motoring public.

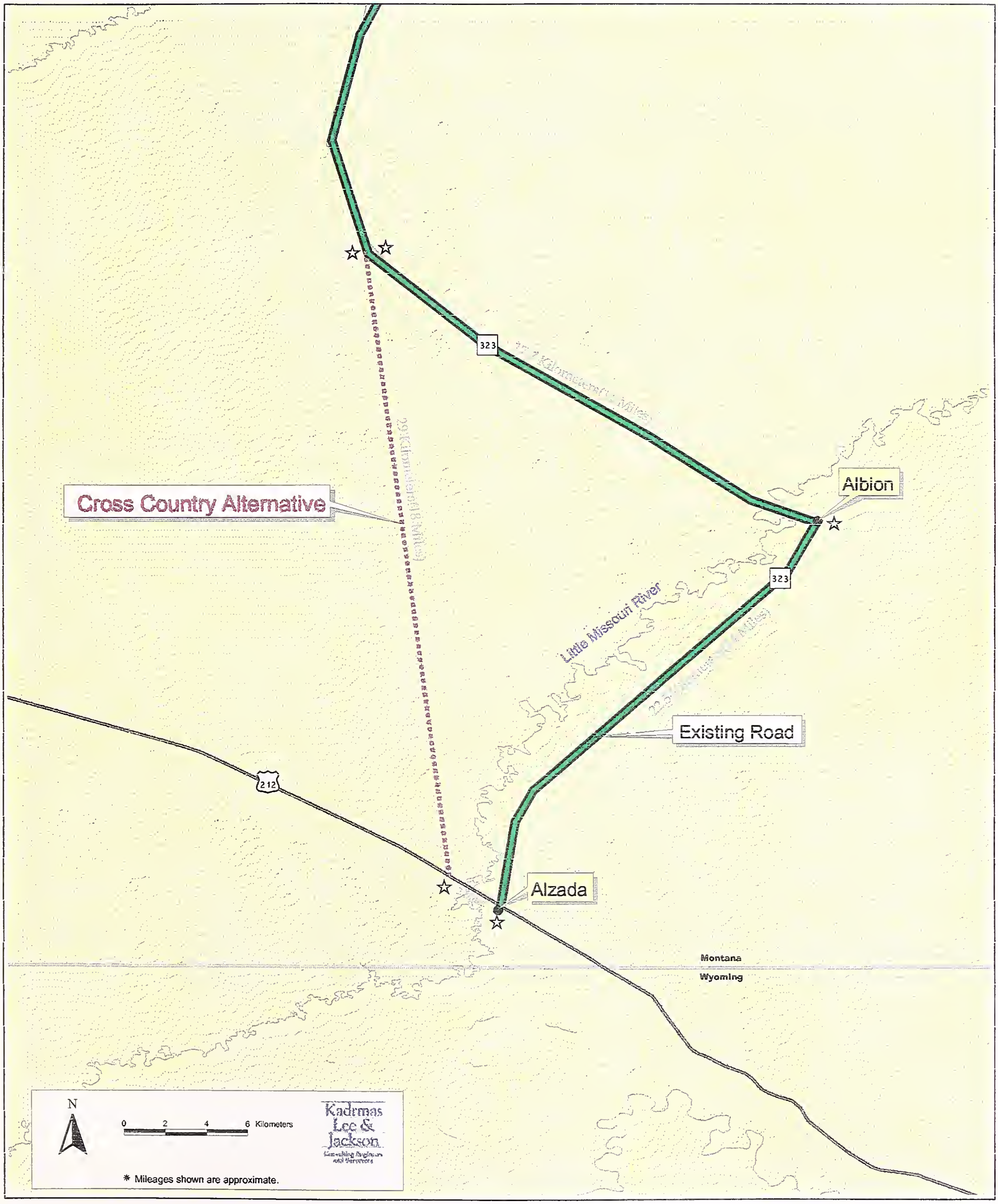
2.2 Alternatives Considered, But Not Advanced

A "cross-country alternative" alignment was considered for the project. This alternative would involve approximately 29 km (18 mi.) of realignment. This alternative would originate approximately 17.7 km (11 mi.) north of Albion and extended southward to intersect Highway 212 approximately 3.2 km (2 mi.) northwest of Alzada (See Figure 5).

The "cross-country alignment" would reduce the highway length by approximately 11.3 km (7 mi.). However, the alternative was not advanced for the following reasons:

- It would result in 18 miles of additional road for the county or state to maintain. The additional 18 miles would require Carter County to stretch already scarce public services such as road maintenance and public safety.
- It would alter the existing development pattern and access pattern in the area.
- It would result in significantly higher right-of-way impacts. The cross-country alternative would open up very remote areas rather than locating the road in areas that are already part of the established travel pattern.
- Construction of the "cross-country" road would result in vegetation removal and road construction activities in previously undisturbed areas.
- It would result in significant visual and wildlife impacts to previously undisturbed areas.

Figure 5: Cross Country Alternative (Not Advanced)



3.0 Environmental Consequences

This chapter documents existing conditions related to social, economic, and environmental issues as defined by the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA). The information in this chapter was obtained by field surveys and visits; discussions with local representatives; contacting local and regional agencies; and coordinating with specialists for certain disciplines, such as: biological resources, wetlands, cultural resources, botany, wildlife, paleontology, and archaeology.

Federal actions that result in significant impacts to the environment must be evaluated. “Significant,” as used in NEPA, requires consideration of both context and intensity. This EA did not find any significant impacts. The benefits or impacts from the No Action Alternative and the Preferred Alternative are assessed and quantified by comparing the project scope and preliminary engineering plans (where available) against the collected data. Design modifications are made to avoid and minimize impacts to the extent possible.

In addition to avoidance and minimization, mitigations are also examined. Mitigations are proposed to make impacts “less severe.” While the No Action Alternative proposes to “do nothing” and includes no impacts, this alternative will offer no safety or maintenance improvements.

3.1 Land Use, Zoning, and Land Use Planning

3.1.1 Affected Environment

The proposed project is located within Carter County and is surrounded by land predominantly used for agriculture. This land is primarily flat and rolling rangeland containing scattered bluffs and numerous ephemeral drainages. The land is used for grazing and hay land, with small areas of cultivated land. There are low density/rural residential homes located around the area, and the project also passes near the old town site of Albion. Alzada is located at the southern end of the project.

The town of Ekalaka is located 40 km (25 mi.) north of the project, and Alzada is located 87 km (54 mi.) east of Broadus. Given these distances from other small rural communities, urban sprawl is not an issue with this project. The purpose of this project is reconstruction for safety improvements rather than capacity improvements.

3.1.2 Land Use Impacts

The No Action Alternative will have no impact on the land use patterns or affect future land use planning.

The Preferred Alternative will not introduce new land uses or promote unplanned growth. There will be no long-term affects on access to adjacent properties or

present traffic patterns. Local access turnouts will be realigned and improved to provide better sight distance and safer access. As part of this project, right-of-way fencing will be located adjacent to the project.

3.1.3 Mitigation

No mitigation required.

3.2 Socioeconomics

3.2.1 Affected Environment

According to the U.S. Census, the 1990 population of Carter County was approximately 1,500. The County consists of 8580 km^2 (3,313 $mi.^2$) and is rural in nature. The largest community is Ekalaka, with a 1994 estimated population of 457. In 1999 Montana Department of Revenue listed the County's taxable value as $9,357,841. The principal economic base for the county is agricultural/ranching.

3.2.2 Impacts

The No Action alternative should not alter the area population growth or other demographic characteristics or trends. Similarly the No Action alternative would have little immediate affect on existing economic conditions within the county. However, accessibility would continue to be hampered due to the limitations of the existing roadway. Over time, these limitations could have a negative affect on economic and social conditions in the area.

Implementation of the Preferred Alternative would not substantially alter the area population, growth, or other demographic characteristics. The Preferred Alternative could have minor short-term construction-related impacts within the study area. Local travel would be interrupted during construction.

Local employment, sales, and revenues would be enhanced in the short-term during project construction due to income increases related to construction jobs and construction workers using local businesses and services. Regional employment and sales may also experience a short-term increase due to the presence of the construction work force, however, long-term growth trends are not anticipated to change.

3.2.3 Mitigation

Mitigation measures that will minimize construction-related impacts include:

- Placing public service announcements in local newspapers identifying construction activity schedules and estimated delays.

- Using flaggers and construction signage.

3.3 Prime and Unique Farmland

3.3.1 Affected Environment

The U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) standard letter was sent to Carter County for comment. Carter County returned form AD-1006 stating that there are no Prime or Unique Farmlands of state or local importance located adjacent to the study area.

3.3.2 Prime and Unique Farmland Impact

The No Action Alternative will have no impact to prime or unique farmland.

The Preferred Alternative will have no impact to prime or unique farmland; therefore, this alternative is in accordance with the Farmland Protection Policy Act (7 U.S.C., et seq.) and no additional measures are necessary.

3.3.3 Mitigation

No mitigation is required.

- Excess right-of-way will be reclaimed, then abandoned and returned to adjoining landowners.

3.4 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966, as amended requires that federally funded projects be evaluated for the affects on historic and cultural properties included in, or eligible for listing in, the National Register of Historic Places. A Class III cultural resource inventory was performed on the proposed project. The inventory results are contained in a document titled *A Cultural Resource Inventory of 47 Miles North of Alzada, Carter County, Montana January 2000.*

3.4.1 Affected Environment

The cultural resource inventory of the proposed Secondary Highway 323 improvements resulted in the recordation of two prehistoric sites (24CT579, 24CT581), three historic sites (24CT580, 24CT582, and 24CT583), and five isolated finds. One previously recorded prehistoric site, 24CT449, was also recorded. A second previously recorded site, 24CT285, was resurveyed and evaluated. Testing demonstrated the lack of buried cultural deposits on all sites. All sites and isolated finds are recommended as “not eligible” for inclusion on the National Register of Historic Places.

3.4.2 Cultural Impacts

The No Action Alternative will have no affect on the culture of the land.

The Preferred Alternative will have no affect on the previously listed historical sites. SHPO concurred with this in a letter dated January 3, 2000.

3.4.3 Mitigation

No mitigation required.

3.5 Right-of-Way and Relocation

3.5.1 Affected Environment

The portion of highway 323 being evaluated in this environmental assessment is 75.6 km (47 miles) in length. Of the 75.5 km, 20.9 km (13 miles) is on land owned by the United States Government and administered by the BLM. Of the remaining 54.7 km (34 miles) of road, 49.9 km (31 miles) is on easements through private property and approximately 4.8 km (3 miles) is on right-of-way owned by the State of Montana.

With the exception of 4.8 km (3 miles) owned by the state, the existing road is located on easements. 49.9 km (31 miles) of theses easements were conveyed to the State of Montana by Carter County in the late 1940's and early 1950's. 20.9 km (12.9 miles) of the existing road is on right-of-way easements granted to the State of Montana from 1963 to 1982.These easements vary in width from 60 to 100 feet and total approximately 53.4 ha (132) acres.

The Quit Claim Deeds, which transferred Carter County's interest in "60' wide strip of land", did not clearly transferring ownership of these '60' wide strips of land'. Therefore the ownership of these 'strips of land' is considered to remain with the underlying property owners.

3.5.2 Right-of-Way Impacts

The No Action Alternative would require no new rights-of-way or easements acquisitions.

Rights-of-way for the Preferred Alternative are proposed to generally be 40 meters wide. On secondary roads, such as Highway 323, MDT's minimum standard calls for a right-of way width of 20 meters either side of the centerline of the road or 3 meters beyond the construction limits of the road, whichever is greater. This standard was developed to accommodate construction and future maintenance operations.

It is also the policy of the Montana Department of Transportation to acquire fee simple ownership of right-of-way for major road reconstruction projects. Since the majority of the existing road is located on easements, virtually all of the land necessary to establish the proposed 40 meter right-of-way will need to be purchased from the underlying and adjacent landowners. The Preferred Alternative will require that approximately 196 ha (484 acres) of additional right-of-way be acquired from these private landowners.

Additional right-of-way will also have to be acquired from the BLM. As it is the BLM's policy to grant right-of-way easements, rather than allow right-of-way to be purchased in fee, 64 ha (158 acres) of easements will need to be acquired from the BLM.

The alignment of the Preferred Alternative will generally shift 15 meters (49 ft) to the west of the existing road. Two areas have been identified as areas where the proposed alignment will deviate significantly from the 15 meter offset. One of these realignments is south of Hawksnest Creek (See Figure 4) and the other is near Albion (See Figure 6).

The realignment near Albion will involve the old town site of Albion that now contains only a rural school and a grange hall. The road currently is located in close proximity to the two structures, and a shift 15 meters west would bring the road even closer to the structures. The area approximately ½ mile south of the school and grange hall is an area that has significant snow problems. That portion of the road is often "drifted closed." The proposed realignment in the Albion area would have the following benefits:

- It would relocate and elevate the road to a ridgeline, reducing the snow problem, especially in the area immediately south of Albion. (The Carter County Commissioners identified this portion of the existing road as having an unusually high incidence of road closure due to drifting snow.)
- It would move the main road farther away from the school.
- It would result in two curves instead of the current five curves.

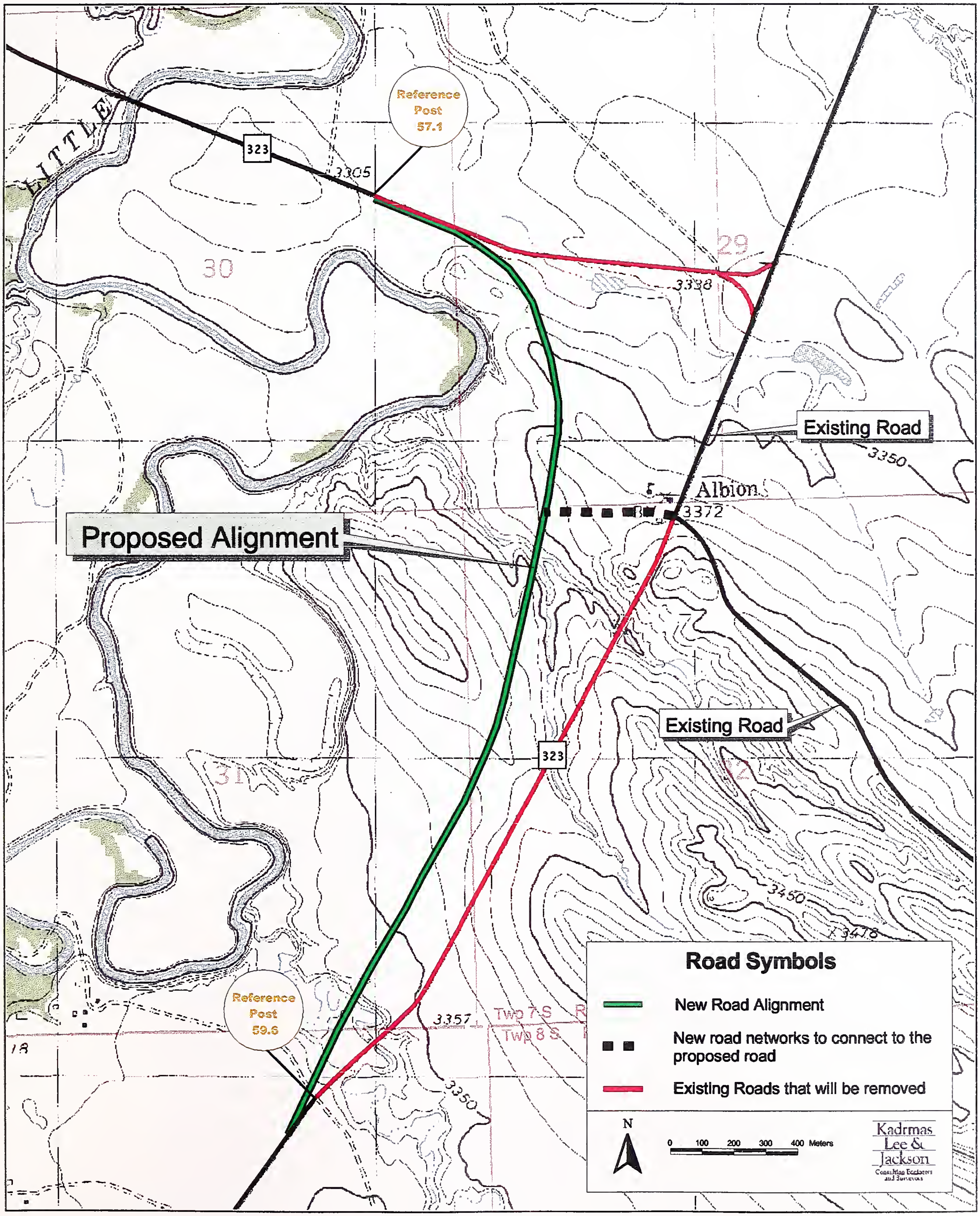
The proposed Hawksnest realignment will involve a portion of the existing road that has been identified as a problem area due to a high number of substandard curves. The Hawksnest realignment would have the following benefits:

- It will replace the existing ten curves with three curves.
- It will help reduce the number of accidents that occur in the area. (See Section 1.6, Safety and Accident Data.)
- It will elevate and relocate the road closer to the ridgeline thereby reducing snow problems.

There may be some site specific changes made to rights-of-way during the detailed designing of each segment of the proposed road. However, these adjustments are expected to be minor and should not significantly affect the amount of right-of-way that is needed to construct the Preferred Alternative.

The Preferred Alternative would not require any relocation of structures or residents.

Figure 6: Albion Proposed Alignment



3.5.3 Mitigation

The following measures will be taken to reduce the road right-of-way impacts:

- The minimum necessary right-of-way will be acquired,
- Excess right-of-way will be reclaimed and then abandoned and returned to adjoining landowners.

3.6 Air Quality

3.6.1 Affected Environment

Construction activities will cause minor short-term air quality impacts in the form of dust from earthmoving activities and handling of cement or aggregate. Wind erosion of exposed areas and material stockpiles will also generate particulate matter. Emissions from construction equipment are regulated by federal standards, and state and local regulations regulate any open burning.

3.6.2 Air Quality Impacts

The No Action Alternative will have no affect on the air quality of the surrounding area.

The Preferred Alternative will have short-term air quality impacts during construction. No long-term impacts to air quality are expected because there is no capacity improvement, and no significant increase in traffic volume is projected.

3.6.3 Mitigation

These impacts will be minimized by implementation of Best Management Practices and standard MDT procedures.

3.7 Noise

3.7.1 Affected Environment

Construction activities will result in temporary increases in noise levels within the existing ROW where traffic noise already occurs.

3.7.2 Noise Impacts

The No Action Alternative will not have any impacts on noise levels.

Under the Preferred Alternative, a minor but temporary increase in noise level will occur during construction. Because no significant increase in traffic volume is projected, no permanent increase in noise will occur.

3.7.3 Mitigation

The short-term impacts will be minimized by implementation of BMP's and standard MDT procedures.

3.8 Water Quality

3.8.1 Affected Environment

The Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, provides the authority to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharge (Section 402) and for dredge or fill material (Section 404).

The Little Missouri River is considered impaired water by the MDEQ and is included on the MDEQ's 1998 list of *Waterbodies in Need of Total Maximum Daily Load (TMDL) Development*. Probable impaired uses within the creek listed by the MDEQ include "aquatic life support" and "warm water fishery." Probable causes for impairment include flow alteration, siltation, suspended solids, salinity/total dissolved solids/chlorides, and thermal modifications. Probable sources for these causes of impairment include agriculture and natural sources.

3.8.2 Water Resource Impacts

The No Action Alternative will result in no impact to water quality.

Preferred Alternative impacts may include increases in erosion potential, reduced slope stability, and an increase in turbidity.

3.8.3 Mitigation

Use of BMP's during construction will reduce the chances of water quality impacts on this project. Construction and hazardous materials shall not be stockpiled in or adjacent to stream areas. Clearing in stream areas shall be limited to designated construction limits.

3.9 Vegetation

3.9.1 Affected Environment

The area to be disturbed is located along both sides of the PTW and contains 184 vascular plant species. Refer to the *Vascular Plant Species of Special Concern*

Survey Report, July 2000, for the complete list of species names. Some of the area has been previously disturbed through road maintenance activities that include weed spraying, grading, and ditching. In addition, private landowners have tilled and seeded some areas for agricultural purposes, mostly hay and pasture production. The non-native species *Melilotus officinalis* (yellow sweetclover) has high cover along the roadway for nearly the entire length of the project.

3.9.2 Vegetation Impacts

The No Action Alternative will have no adverse affects on the PTW's current vegetation.

The Preferred Alternative will not affect any plant species of special concern. The proposed action will disturb areas currently supporting some cover of native plants and populations, as well as seeded agricultural fields. Construction activities in the area will disturb the ground, allowing a possible increase in noxious weeds to the area.

3.9.3 Mitigation

The following measures will be taken to reduce the possible damage to vegetation:

- Limiting the time of exposure of bare ground.
- All disturbed areas shall be revegetated with native grasses.
- In accordance with 7-22-2152 MCA and 60-2-208 MCA, MDT will re-establish a permanent desirable vegetation community along all areas disturbed by proposed construction. A set of revegetation guidelines will be developed by MDT and must be followed by the construction contractor. These specifications will include instructions on seeding methods, seeding dates, seed types and amounts of mulch and fertilizer and seed mix components.
- Post-construction efforts will include spot spraying to limit the spread of noxious weeds.
- The existing PTW will be reclaimed as soon as possible after each project is completed.

3.10 Wetlands

3.10.1 Affected Area

Project area wetlands were delineated in May 2000 by Western Eco Tech in accordance with the *US Army Corps of Engineers 1987 Wetlands Delineation Manual* (Environmental Laboratory 1987). Each wetlands site, within a corridor ranging from 100 to 140 meters wide, was surveyed using the 1999 MDT Montana

Wetlands Assessment Method. A *Biological Resources Report* (BRR) was prepared by Western Eco Tech in June 2000 that details the wetlands survey.

The BRR indicated that were 72 wetlands in the project study corridor. (Table VII. in Appendix B is a complete listing of those 72 wetlands and their characteristics.) All wetlands within the survey corridor are rated either Category III or IV wetlands using the 1999 MDT Wetlands Assessment Method. The Category IV wetlands are primarily small emergent pockets within ephemeral drainages or small emergent depressions within or immediately adjacent to roadside borrow ditches. The Category III wetlands are associated with larger drainages and depressions along the corridor. Most of these wetland sites are disturbed due to the area's historic land use, i.e., grazing activities, and because of their proximity to roads.

Of the 72 wetlands identified, 19 are likely to be "non-jurisictional" because no connection to a water body of the U.S. exists and because they have developed entirely within an upland area due to a man-caused activity, i.e., road construction. The final determination of jurisdictional wetlands impacts and the required amount of mitigation will be made during the final assessment of unavoidable wetland impacts that will be conducted by COE during the design phase of each roadway segment. Non-jurisdictional areas have not been included in the jurisdictional wetlands acreages impacted, and no mitigation is required for impacting these areas. (See COE's December 14, 2000 project review letter, Appendix A.)

3.10.2 Wetland and Vegetation Impacts

The No Action Alternative will have no affect on wetlands or existing vegetation.

It is currently estimated that the Preferred Alternatives for the four (4) projects evaluated by this EA will result in a cumulative, unavoidable loss of approximately 3.4 ha (8.4 acres) of wetlands. These wetland losses are unavoidable due to the clearing/grubbing and fill placement activities required to construct these projects. Temporary impacts will also occur within the construction limits and temporary construction easement boundaries.

3.10.3 Avoidance and Minimization

The *1990 Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines* requires that wetland mitigation be addressed in the following sequence:

(1) Avoid potential impacts to the maximum extent practicable.

(2) Minimize unavoidable impacts to the extent appropriate and practicable.

(3) Compensate for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been required.

Executive Order 11990 states:

> *That there be no practicable alternative to the proposed construction; and that the proposed project include all practicable measures to avoid and minimize harm to wetlands that may result from such use, with mitigation of inevitable loss.*

The MDT Glendive District Project Biologist reviewed the biological resources and wetland findings reports and has identified several wetlands for their importance as wildlife habitat and to the water resources found in the vicinity of these projects (see Table III.), in addition to several other important functions and values. It has been determined that most of these wetlands have an association with groundwater and are therefore unique and important to the wildlife and groundwater aquifers found in this area, which is known to be arid in nature. The wildlife use of these areas is thoroughly documented. As a result, it can be clearly shown that the use of these areas by wildlife is highest during periods of high stress, i.e., droughts, winter storms. Consequently, these areas must be avoided to the extent possible to minimize the project's impacts.

All of the wetlands listed in Table III. have been or will be given special design considerations during the development phase of each project. These wetlands are Category III wetlands that have been documented for having higher overall functions and values on the MDT Montana Wetland Assessment Form (revised 5/25/99).

Table III. Wetlands Requiring Special Design Consideration

Location (Project Segment)	Wetland Numbers
Alzada-North	10,17
Albion-North & South	22,23,24,25,26,27A, 27B, 27C
Unprogrammed Segment	42,44,48A, 50
40 km South of Ekalaka	69

3.10.4 Avoidance and Minimization Measures

The most significant special design consideration to avoid and minimize impacts to wetlands is the alignment of the proposed road. In order to minimize impacts the proposed road will be located as close to the existing alignment as practical. The first road alignment that was considered called for constructing the proposed road over the existing road. However, due to the increase in cost of construction and disruption to traffic associated with this approach, it was determined that it would be preferable to "offset" the proposed road.

Initially a 10 meter offset to the west was considered. However, a 10 meter offset would extend the construction limits of the proposed road to approximately centerline of the existing road. This would require closure of portions of the existing roadway during construction. A 15 meter offset would provide enough distance

between the existing road and the proposed road to allow the existing road to remain open to the public during the construction of the proposed road, therefore it was determined that a 15 meter offset would better meet the goal of reducing construction costs and disruption of traffic.

A strict 15-meter offset for the entire project would result in the loss of approximately 3.4 ha (8.4 acres). In order to minimize the impacts to the wetlands that have been identified as requiring special design consideration, the following measures will be considered during the detailed design phase of each road segment:

- Reducing the 15 meter offset to 10 meters where wetlands requiring special design considerations are identified
- Constructing the new road "over" the existing road
- Shifting the alignment less than 15 meters
- Shifting the alignment to the opposite side of the existing road

Even though the majority of road alignment adjustments will be made during the detailed engineering phase of each segment, three areas have already been identified as areas where the 15 meter offset is not being proposed. These three areas are:

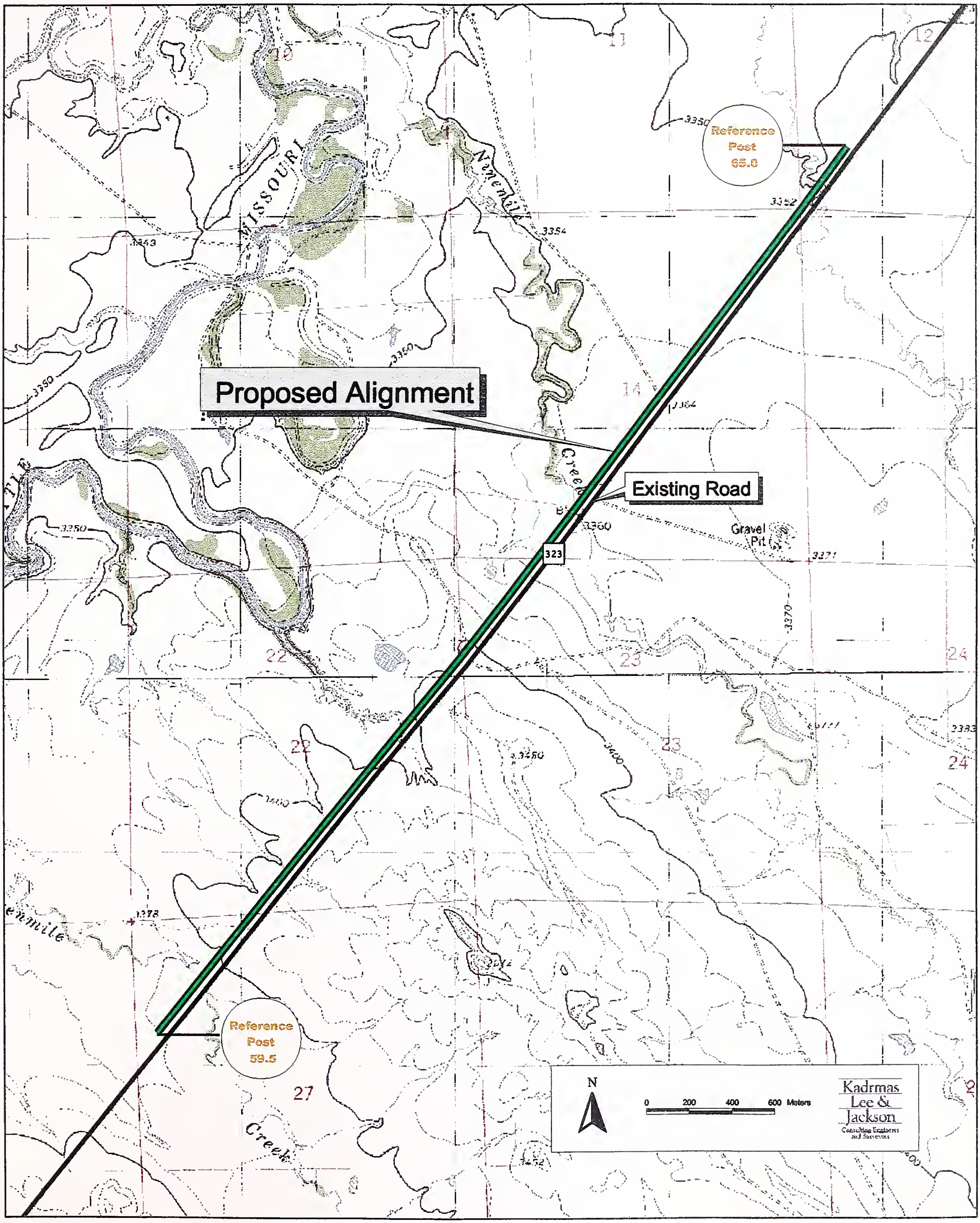
- The Hawksnest Creek Area (Reference Post 39.6 to 41.6, See Figure 4). In this area the proposed road is being shifted west to straighten out substandard curves and avoid and minimize wetlands impacts.
- Near the old townsite of Albion (Reference Post 57.1 to 59.6, See Figure 6). In this area the preferred alignment is being shifted significantly west to the bench above the Little Missouri River to reduce snow problems and to avoid and minimize wetlands impacts.
- From 1 mile north of Ninemile Creek to just south of Sevenmile Creek (Reference Post 59.5 to 65.0, See Figure 7). In this area a 10 meter west offset is proposed to avoid and minimize wetland impacts to Category III wetlands.

These three alignment "deviations" will reduce impacts to Category III and greater wetlands by approximately 8,192 square meters. Table IV. lists these wetlands impacts reductions by project segment.

Table IV. Proposed Realignment Wetlands Impacts Reduction

DEVIATION REALIGMENT	*WETLANDS NUMBER*	*15 METER OFFSET ALIGNMENT IMPACTS (M^2)*	*DEVIATION REALIGNMENT IMPACTS (M^2)*	*WETLANDS IMPACTS REDUCTION (M^2)*
Sevenmile Ck	10	1924	1622	302
	17	831	771	60
Albion	22	7,620	2,300	5,320
	23	3,000	1,610	1,390
	24	1,120	0	1,120
Hawksnest	42	0	0	0
	TOTALS	**14,495**	**6,303**	**8,192**

Figure 7: Sevenmile Creek Proposed Alignment



Steepening the fill slopes (borrow ditches) was another special design approach that was considered to reduce impacts to wetlands. The use of 3:1 fill slopes through the wetland areas, instead of the 4:1 slopes was examined. 4:1 fill slopes are Montana Department of Transportation's standard fill slopes for low volume rural collector roads.

Even though 3:1 fill slopes are considered safely traversable, a driver is unlikely to recover and will likely continue down the slope to its toe. However, 4:1 fill slopes are considered a recoverable fill slope that can be safely traversed, and the motorist has a reasonable opportunity to stop and return to the roadway. MDT weighed the safety concerns against the amount and type of wetlands impact reduction that would be achieved using 3:1 fill slopes in the wetlands areas. They determined that 3:1 fill slopes would place large culvert openings within the clear zone due to the low vertical alignment, i.e., fill height, thus creating an additional safety hazard. Therefore, shifting the horizontal alignment of the proposed roadway was determined to be a more acceptable method of avoiding and minimizing wetland impacts in the identified areas.

The Preferred Alternative for each project will include the considerations listed and discussed above to the fullest extent possible during the design of these projects to avoid and minimize impacts to wetlands. However, it is possible that the Preferred Alternative may have no practical alternatives to avoid and minimize wetland impacts while still maintaining a safe road design, resulting in a measured amount of unavoidable wetland impacts. The final amount of unavoidable wetland impacts will be calculated and reported to the U.S. Army Corps of Engineers before the final development of the Preferred Alternative for each project.

3.10.5 Wetland and Stream Mitigation

Compensatory mitigation will be required for unavoidable impacts to wetlands (See COE December 14, 2000 letter, Appendix A). It is MDT's policy that when avoidance is not possible, on-site mitigation will be given priority. Two wetlands (Numbers 9 and 10) have been identified as areas where existing emergent wetlands can be expanded to provide mitigation. Expanding wetland Number 9 can be achieved by excavating the existing roadway upon the completion of this project. This method of on-site, project specific mitigation work has been done with success on other MDT projects. The use of these two areas is contingent on the completion and a favorable outcome of the feasibility studies for each site. Landowner cooperation and development potential are large components of a feasibility study.

Stream impacts will be mitigated on site by restoring historic straightline channel changes, back into a more natural meandering configuration with a low water channel. Stream impact sites will be identified and addressed during the design of each project.

In the event that on-site replacement or enhancement is not possible due to construction, safety, maintenance or other constraints, off-site mitigation may be considered. In January 2000, MDT and the BLM signed a memorandum of agreement relative to wetlands in the watershed. This agreement has resulted in the creation of a large wetlands complex approximately 4.8 km (3 mi) west of the project southwest of Ridgeway, however, the COE has not yet approved the use of the site for compensatory mitigation. With the proper permitting and COE approval, this wetlands complex could possibility serve as a mitigation site for the project.

The following mitigation measures are recommended to minimize disturbance of wetlands and provide compensatory mitigation for unavoidable impacts to wetlands:

- Develop a mitigation plan for wetland impacts in coordination with the COE in conjunction with the detailed design engineering of each segment.
- A roadway alignment reassessment shall be conducted in conjunction with the detailed design engineering of each design segment of the project.
- All stream channel relocations resulting in reduction in overall stream length shall be mitigated as part of MDT's stream restoration efforts.
- All state and federal water quality requirements/conditions will be complied with.
- Construction materials and hazardous materials will not be stockpiled in or adjacent to wetlands or stream areas.
- Width of the construction limits will be minimized in wetland and stream areas.
- BMP's will be used to limit sedimentation and erosion around wetland and stream areas.

3.11 Wildlife and Fish

3.11.1 Affected Environment

Wildlife species inhabiting the project area are typical of those that occur in grasslands, cultivated lands, and riparian areas of the southeastern plains. Refer to the *Draft Biological Resources Report* for a complete list of species. According to Thompson (1982), 45 mammals are known to occur in the latilong (an approximate 3200-square mile block of land measuring one-degree longitude by one-degree latitude) that contains the project. No concentrated wildlife mortality areas have been identified in the project area.

According to Reichel and Flath (1995), about 19 different reptiles and amphibians occur in the area. With nearly three-fourths of these species relying upon area creeks, ponds, and wet meadows, water quality issues assume added importance during construction.

The Montana Bird Distribution Committee (MBDC, 1996) compiled observations of 78 different bird species from 1991-195 within the quarter latilong containing the project. Much of this high species diversity is likely due to the presence of the Little Missouri River within the latilong. An extensive list of possible species is not presented here. However, the project area is likely to be occupied by a variety of passerines, raptors, upland game birds, and waterfowl.

Habitat and sport classes as well as final fisheries resource values assigned to each of these streams by the MRIS (2000) are shown in Table V.

Table V. Summary of MRIS Ratings for Project Area Streams

Stream	*Habitat Class (1 to 5; 1 is highest; 6 is no data*	*Sport Class (1 to 5; 1 is highest)*	*Final Fisheries Resource Value*
Skull Creek	6 – no data	5 – no game or sport fish	Limited
Prairie Dog Creek	6 – no data	5 – no game or sport fish	Limited
Hawksnest Creek	6 – no data	5 – no game or sport fish	Limited
Boxelder Creek	6 – no data	5 – no game or sport fish	Limited
Little Missouri River	2 – high	4 – game or sport fish	High-value
Twelvemile Creek	No data – unrated	No data – unrated	No data – unrated
Ninemile Creek	6 – no data	5 – no game or sport fish	Limited
Sevenmile Creek	4 – low/moderate	5 – no game or sport fish	Moderate
Fivemile Creek	No data - unrated	No data – unrated	No data - unrated

The Little Missouri River is considered an impaired water by the Montana Department of Environmental Quality (MDEQ) and is included on the MDEQ's 1998 list of *Waterbodies in Need of Total Maximum Daily Loads Development.* The probable impaired uses within the creek listed by MDEQ include "aquatic life support" and "warm water fishery." Probable causes for impairment include flow alteration, siltation, suspended solids, salinity/total dissolved solids/chlorides, and thermal modifications. Probable sources for these causes of impairment include agriculture and natural resources.

With the exception of the Little Missouri River and Sevenmile Creek, no fisheries data have been collected on project area streams. Some of the species that occur within the Little Missouri River could, at times, occur within project area tributaries,

particularly *Cyprinids* (minnow family). Some of these streams may be used as spawning or nursery habitats during spring.

3.11.2 Wildlife and Fisheries Impacts

The No Action Alternative will have no affect on the wildlife or fisheries of the proposed project location.

Preferred Alternative – Overall, construction activities in the project area would cause only minor, indirect disturbance to wildlife communities. Traffic volumes are likely to increase over time, increasing the chance for wildlife/vehicle collisions. However, the extremely low projected (year 2020) ADT of 70 vehicles per day is not expected to substantially increase wildlife mortality in the project area over the current (1999) ADT of 50 vehicles per day.

Pronghorn antelope in the project area currently inhabit both sides of the highway throughout the length of the project area. Portions of the existing ROW are fenced. Both barbed wire and woven wire fencing is being used. Pronghorn in the area have adapted to the existing road and right-of way fences, and substantial impediment to wildlife movement is not apparent in the project area.

Fencing types are generally an item negotiated with landowners and lessees; however, an increase in the amount of exclusionary (woven wire) fencing along the ROW could have a detrimental effect on the movements of antelope during critical winter periods.

Construction activity disturbances would be temporary, and alternative habitat similar to the affected habitat is abundant in the general area. The survival of displaced species that resided exclusively within the construction area (e.g., species with very limited home ranges, such as mice and voles) would depend on the carrying capacity of adjacent undeveloped habitat.

3.11.3 Mitigation

The following measures are proposed to minimize impacts to terrestrial resources on the proposed project:

- Along ROW currently fenced with woven wire, the type of replacement fencing is at the discretion of the landowner or lessee. Along ROW currently fenced with barbed wire, replacement fencing shall be barbed wire. In the event fencing is erected in areas that are currently unfenced, barbed wire fences shall be constructed.

- In forested riparian habitat at Fivemile, Ninemile, Twelvemile, and North Butte Creeks construction limits will be restricted to the minimum necessary areas.

- To minimize potential impacts to breeding sage grouse, no temporary construction staging areas, crushers, plant mix facilities or similar facilities should be sited within 0.8 km (0.5 mi) of the sage grouse lek in T4S / R58E / S24 & 25, if occupied, between the period of March 15 and May 15, or until displaying / breeding activities have terminated for the year. BLM's standard stipulation for sage and sharp-tailed grouse is that surface disturbance is prohibited from March 1 to June 15 within two miles of a lek. This standard stipulation applies only to federal land and can be modified by BLM's authorizing officer.

- An MDT biologist shall be informed of any occupied large raptor nest observed within 0.5 miles of the proposed project during construction. In some cases, construction-timing restrictions may be appropriate to reduce potential impacts to species particularly sensitive to human disturbance.

- Any overhead power lines to be relocated shall be raptor-proofed in accordance with *Suggested Practices for Raptor Protection on Power Lines.*

- The location of construction-related activities, such as staging and borrow/gravel source activities, must be reviewed by an MDT biologist prior to construction relative to their possible impacts to sage grouse and other wildlife, as well as rare plants.

3.12 Endangered or Rare Species

Section 7 of the Endangered Species Act requires each federal agency to insure that any action funded or carried out by such agency is not likely to jeopardize the continued existence of any federally listed endangered or threatened species or species proposed to be listed, or result in the destruction to or adverse modification of habitat of such species.

3.12.1 Affected Environment

Consultation with the USFWS indicated that the studied location might contain 4 federally listed threatened or endangered species. Table VI. (following) summarizes the list and each species' preferred habitat, probability of occurrence, and a determination of affect. Please refer to the *Draft Biological Resources Report, June 2000.*

Table VI. Threatened and Endangered Species Summary

Species	*Status*	*Primary Occurrence in the Project Area*	*Primary Habitat Directly Affected*	*Determination of Affect*
Bald eagle	Threatened	Little Missouri River; winter resident and migrant; no known nesting or potential nesting habitat.	None	Not likely to adversely affect
Whooping crane	Endangered	Possible migrant.	Emergent wetlands, grain fields (migration).	Not likely to adversely affect
Mountain plover	Proposed Threatened	No known occurrence; project falls within general range.	Grasslands and shrub-steppe habitat adjacent to existing highway.	Not likely to jeopardize
Black-footed ferret	Endangered	Observed at a prairie dog town approximately 3.2 km (2 mi.) northwest of Alzada (2.4 km [1.5 mi.] west of the highway) in 1953.	None; no prairie dog towns to be affected.	No affect

3.12.2 Species Impacts

The No Action Alternative will have no impacts to threatened or endangered species in the project location.

The Preferred Alternative, as discussed in the *Draft Biological Resources Report, June 2000*, is not likely to have any affect on the bald eagle, whooping crane, mountain plover, or black-footed ferret.

3.12.3 Mitigation

The following measures will reduce any impact that might occur:

Bald Eagle - The following coordination measures are recommended to ensure that any impacts to bald eagles are minimized:

- Any overhead power lines to be relocated will be raptor-proofed in accordance with *Suggested Practices for Raptor Protection on Power Lines.*
- The location of construction-related activities, such as staging and borrow/gravel source activities, will be reviewed by an MDT biologist prior to construction relative to their possible impacts to bald eagles.

Mountain Plover - The following coordination measures are recommended to ensure that any impacts to mountain plovers are minimized:

- The proposed substantial alignment shift areas near Albion and Hawksnest Creek will be examined for evidence of mountain plover nesting prior to construction to ensure that impacts to nesting plovers are avoided.
- The location of construction-related activities, such as staging and borrow/gravel source activities, will be reviewed by an MDT biologist prior to construction relative to their possible impacts to mountain plovers.

3.13 Floodplains

3.13.1 Affected Environment

There are nine surface waterways within the study area: Skull Creek, Prairie Dog Creek, Hawksnest Creek, Box Elder Creek, Little Missouri River, Twelvemile Creek, Ninemile Creek, Sevenmile Creek, and Fivemile Creek. Federal Emergency Management Agency (FEMA) has not delineated a 100-year floodplain for any of these waterways.

3.13.2 Floodplain Impacts

Executive Order 11988 and FHWA's floodplain regulations (23 CFR 650, Subpart A) requires an evaluation of the proposed action's encroachment on the base floodplain. Any proposed increase in road elevation must be evaluated to determine the affects on flood elevation and the increase to insurable property.

The No Action Alternative would not require any additional encroachment on the 100-year floodplain.

The Preferred Alternative proposes to use the existing bridge across the Little Missouri River. The use of the existing bridge would result in no additional disturbance to the major floodplain in this project. The culverts throughout the project will be sized so as to result in no change to the existing floodplain patterns.

3.13.3 Mitigation

The following measures will reduce affects to the floodplains:

- Roads shall be constructed such that they are compacted, well graded, impervious, generally unaffected by water and frost, and have stable fill.
- The culverts throughout the project will be sized so as to result in no change to existing floodplain patterns.

3.14 Hazardous Materials

3.14.1 Affected Environment

A petroleum release was discovered at the Alzada Grocery Store in March, 1992 when the two gasoline UST's and piping at the site were removed by the previous site owner. Subsequent investigation by MDEQ confirmed the presence of petroleum constituents in the soil and groundwater, including benzene at concentrations above the EPA maximum contaminant level (See Figure 8). In 1994, MDEQ contracted for installation of a filtration system to remove petroleum and to monitor the water quality. (See *Alzada Grocery Store, Alzada, Montana, June 1997.*) Monitoring data since January 1995 indicates that the plume is stable or shrinking in size and that natural attenuation is effectively limiting the migration of affected groundwater and decreasing hydrocarbon concentrations in the shallow soil and groundwater. After the domestic water system was replaced in 1997, MDEQ required no further investigative work or corrective action. At that time, the groundwater monitoring wells and water supply well were abandoned in accordance with MDNRC regulations. However, some potential exists for petroleum-affected soil and groundwater to impact the area if construction activities (such as subsurface excavation) occur within the impacted area. Detailed information regarding the petroleum-contaminated soils and groundwater in the vicinity of the Alzada Grocery Store can be found in the following reports:

- *Phase I Remedial Investigation of Petroleum-Contaminated Soil and Groundwater at the Alzada Grocery Store*, April 1995, prepared by Huntington Engineering and Environmental, Inc., Helena, MT.

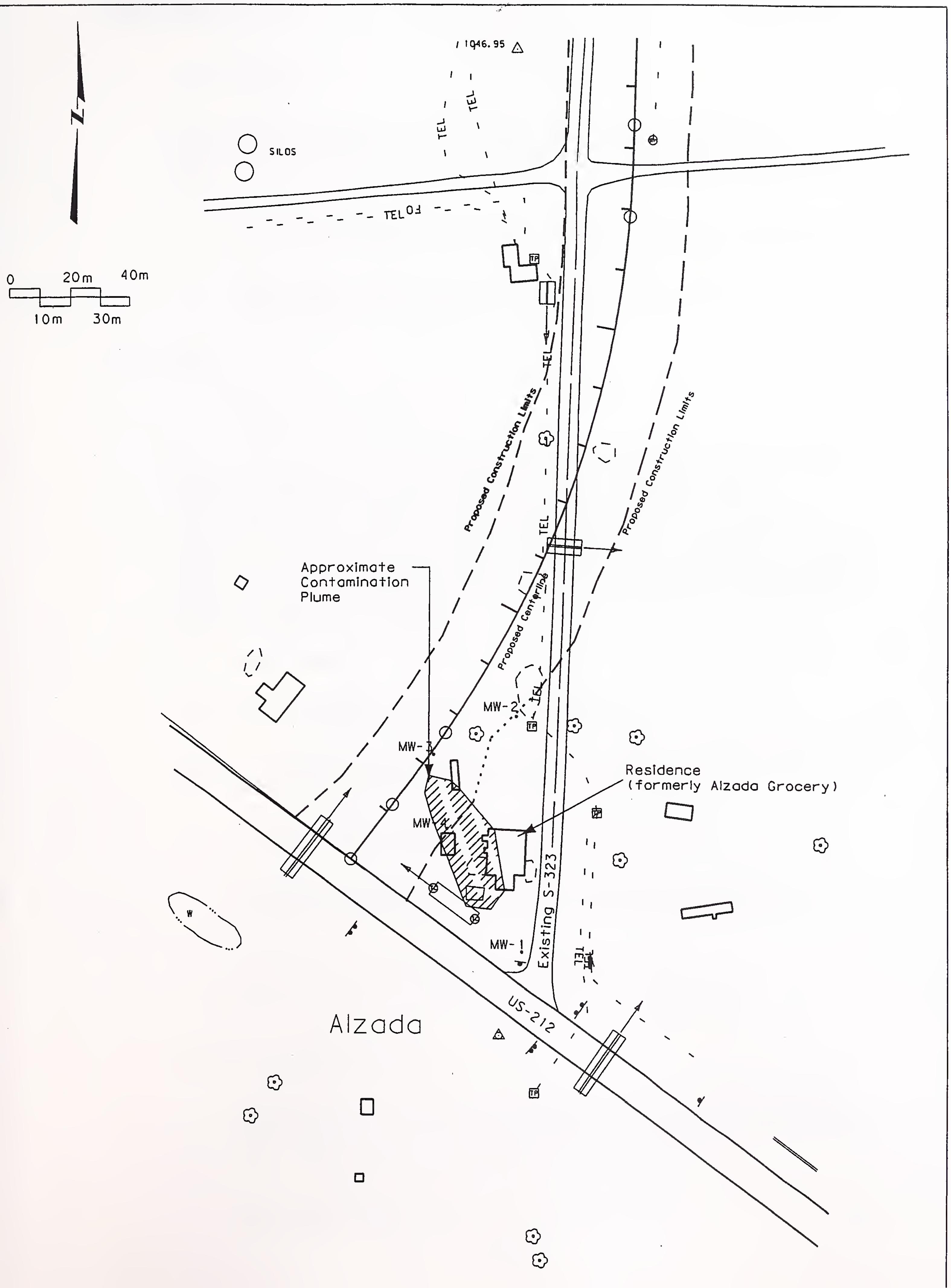
- *Second Quarter 1997 Remedial Activities, Alzada Grocery Store,* June 1997, prepared by Maxim Technologies, Billings, MT.

3.14.2 Hazardous Material Impact

The No Action Alternative will have no affect on the contamination plume in the vicinity of the Alzada Grocery Store.

The Preferred Alternative will require construction above the contaminated area, but excavation will not occur to the depth of the plume (See Figure 8). Engineering plans for construction require excavation only about 1 meter in depth. MDEQ reviewed the plans and stated in a letter dated August 24, 2000 (See Appendix A), "that it does not appear that the proposed realignment at the intersection will negatively affect additional investigations, if deemed necessary."

Figure 8
Contamination Plume Location


N
0
20m
40m
10m
30m
1046.95
SILOS
TEL
TEL
TEL FO
TP
TEL
Proposed Construction Limits
Proposed Construction Limits
TEL
Approximate Contamination Plume
Proposed Centerline
TEL
MW-2
TP
MW-3
Residence (formerly Alzada Grocery)
MW-4
Existing S-323
MW-1
TEL
W
US-212
Alzada
TP

3.14.3 Mitigation

Although the contaminated soil and groundwater will not be disturbed by construction activities, the following measures will be taken when dealing with this site:

- Final engineering plans will minimize excavation in the area of the plume.
- MDEQ will be notified within 24 hours of the discovery of any petroleum contamination during construction.

3.15 Visual

3.15.1 Affected Environment

The proposed alignment traverses level-to-rolling rangeland containing scattered bluffs and numerous ephemeral drainages. Land use along the project is agricultural, primarily rangeland with some hay land and a few small areas of cultivated land. Most of the areas along both sides of the PTW have been disturbed through road maintenance activities including weed spraying, grading, and ditching work. Some of the upland areas appear to have been burned to increase palatable grasses for agricultural purposes.

3.15.2 Visual Impacts

The No Action Alternative will have no visual impacts.

Preferred Alternative – Visual impacts associated with the Preferred Alternative will be both short-term and long-term. The short-term impacts include:

- Earthwork associated with construction of the new road.
- Construction equipment and excavation material associated with construction along the new ROW and in construction staging areas.
- Dust and debris associated with construction activity.
- Traffic congestion and detours associated with construction.

The long-term impacts include:

- The proposed roadway will be approximately one meter higher than the existing roadway. The proposed roadway will be raised to better address the snow, wind, and drainage conditions which exist in this area.
- Loss of vegetation in the forested riparian habitat at Fivemile, Ninemile, and North Butte Creeks.

3.15.3 Mitigation

Limit clearing to the proposed construction limits in the Fivemile, Ninemile, and North Butte Creek areas. Disturbed wetlands and streamside areas shall be revegetated with native plant materials as quickly as practical after construction.

3.17 Construction and Erosion Control

3.17.1 Impacts

The No Action Alternative will result in no construction or erosion related impacts.

The Preferred Alternative will create short-term construction impacts. Related impacts include:

- Noise and Vibration – Construction noise is expected from diesel-powered earthmoving equipment. Vibration will occur during the use of compacting equipment. With the exception of the Alzada Grocery area, all residents are located a sufficient distance from the proposed project, so noise and vibration will not have any significant impact.

- Water Quality – Stormwater runoff from areas of exposed soils may cause erosion, transport sediment, or carry spilled hazardous materials into adjacent waterways.

- Air quality – Construction activities could increase local fugitive dust emissions. Fugitive dust is considered airborne particular matter, generally of larger size (100 microns in diameter or bigger).

- Traffic Control – Secondary Highway 323 is expected to remain open throughout the construction period. The roadway may be reduced to one-lane traffic with flagging during some activities. Access to all intersecting roads and residences will be maintained during construction.

3.17.2 Mitigation

These impacts will be minimized by implementation of BMP's and standard MDT procedures.

3.18 Secondary and Cumulative Impacts

Cumulative impacts are defined as impacts that "result in the incremental impact of the action when added to other past, present and reasonably foreseeable future regardless of what agency undertakes such actions." Known projects in this vicinity, with an assessment of probable cumulative impacts are:

- Alzada-E&W (NH 23-3(10) 130 is a 15.45 km (9.6 mi) overlay and shoulder widening project along US Highway 212. Construction should begin in 2001.

- N. of Ekalaka (STPP 27-1( ) 3 is a slope flattening project along MT-7.

- Corral CR.-46 km NE Hammond (BR 277-1( ) 29 is a bridge and approach project across Corral Creek.

- Ekalaka-South is an overlay and culvert replacement project along 13 km (8 mi) of S-323.

- Alzada-South was a reconstruction of Highway 326.

The project area is very sparsely populated and is experiencing very little growth. The Ekalaka to Alzada highway is only projected to reach 70 trips per day in the year 2020 (up from its current 50 trips per day). The Ekalaka to Alzada projects, in conjunction with the above-mentioned projects, is not expected to have a significant impact to the area.

Due to increases in traffic related to construction, temporary impacts could be experienced including dust, noise, and traffic delays during the construction periods.

3.19 Permits Required

This proposed project would be in compliance with provisions for both Water Quality under 75-5-401(2) M.C.A. for *Section 3(a)* authorizations and Stream Protection under 87-5-501 through 509 M.C.A., inclusive. The following permits will be acquired prior to any relevant disturbance:

- A *124SPA Stream Protection* Permit will be required by the MDFW&P.

- A Notice of Intent for Storm Water Discharges under the National Pollutant Discharge Elimination System General Permit (P.L. 92-500) will be required with the U.S. Environmental Protection Agency for the control of water pollution for both specific and non-point sources.

The proposed project will require the following permit under the Clean Water Act (33 U.S.C. 1251-1376):

- A *Section 404* permit from the U.S. Army – Corps of Engineers. The COE will be notified that this proposed project qualifies for a “Nationwide” 404 permit under the provisions of 33 CFR 330.

4.0 Comments and Coordination

As the project involves primarily BLM land, there has been a great deal of coordination with BLM.

4.1. Public Involvement Activities

Immediately after the project was authorized in September of 1999, all 18 landowners along the project were contacted individually. The project was explained to each landowner, the landowners' comments and concerns were noted, and right-of-entry was secured. In October of 1999 each landowner was sent an individual notice of the two upcoming informational meetings.

The two informational meetings were conducted in Alzada on November 15, 1999 and in Ekalaka on November 18, 1999. Display ads were placed in the *Ekalaka Eagle* on October 29, 1999, the *Fallon County Times* on October 29, 1999, and in the *Billings Gazette* on October 31, 1999. In addition to the display ads, notices of the informational meetings also appeared in the 'Calendar of Events' section of the *Ekalaka Eagle* on November 4, 1999; November 11, 1999; and November 18, 1999.

Approximately 110 people attended the two informational meetings. Virtually all participants expressed support for the project and were eager to have construction begin in a timely manner. The principal topics of discussion at the meeting were whether phase one construction should start at Alzada or at the north end of the project and whether the highways should be graveled or paved. Discussions revealed that because of limited funding a longer stretch of road could be improved by using gravel (approximately 9-10 miles) as opposed to pavement (approximately 4-5 miles). By a show of hands, the vast majority, approximately 80%, expressed a preference for a gravel road in order to have the best chance of getting the road funded and constructed.

Front-page headline articles on the project appeared in the *Ekalaka Eagle* on October 8, 1999; October 29,1999; November 19,1999; November 26, 1999 and April 21, 2000.

On October 25, 1999 MDT representatives and representatives of Kadrmas, Lee and Jackson met with Carter County Commissioners. Following the informational meetings Bill McChesney, MDT Glendive District Administrator, met with Carter County Commissioners on November 22, 1999. The Carter County Commissioners also attended the project's preliminary alignment review meeting on July 13, 2000.

4.2 List of Cooperating Agencies and Agencies with Jurisdiction

The Bureau of Land Management is a cooperating agency for this project. *See Appendix A, letter dated May 10, 2000.* In addition to being a cooperating agency, the Bureau of Land Management is also a major "landowner" in the project. Approximately 13 miles of Highway 323 is located on BLM land. The views of the BLM have been solicited during the development of the resource reports including the *Biological Resources Report*, the *Vascular Plant Survey*, and the *Cultural Resources Inventory*. BLM also reviewed and commented on the rough draft of the environmental assessment.

The following agencies have jurisdiction over this project:

> The U.S. Corps of Engineers (COE) has jurisdiction of the Section 404 permitting process.
>
> The Montana Department of Fish, Wildlife and Parks (MDFW&P) will issue a 124 Stream Preservation Act (SPA) permit.
>
> Federal Highway Administration (FHWA).
>
> Montana Department of Transportation (MDT).

4.3 List of Other Contacted or Contributing Agencies, Persons, and Groups

U.S. Fish & Wildlife Service
Department of Natural Resource and Conservation
Department of Environmental Quality
Agricultural Sciences Division
Range Telephone Cooperative
Carter County Commissioners
Carter County Clerk and Recorder
Carter County Superintendent of Schools
Carter County Conservation District
City of Ekalaka
U.S. Department of the Army Corp of Engineers
Mid-Rivers Telephone Cooperative
Western Area Power Administration
Disaster Emergency Service Coordinator

4.4 Remaining Public Involvement

Future public involvement will include issuance of a notice of availability and 30-day Public Comment Period on the draft Environmental Assessment. This notice will be advertised in the local newspaper and mailed to all parties on the project mailing list. Written comments received will be reviewed. If no additional investigation is warranted and no significant impacts are identified, no additional public involvement is planned. A public hearing will not be held unless requested by members of the public.

If, after receipt of all public and agency comments, it is deemed appropriate, a Finding of No Significant Impact (FONSI) will be prepared summarizing the written comments received and provide responses. An Environmental Impact Statement (EIS) will be prepared if a FONSI is not found to be appropriate.

MDT design staff will continue to coordinate with the BLM for plan reviews and additional concerns.

5.0 List of Preparers

Kadrmas, Lee and Jackson, P.C. prepared this Environmental Assessment under a contractual agreement between MDT and Kadrmas, Lee and Jackson.

5.1 Qualifications

Listed below are those individuals with primary responsibility for preparation of this environmental assessment.

Gene Jackson	Principal	Senior Review
Tim Kelly	Senior Engineer	Project Management, Engineering Design
Mike Casey	Senior Planner	Project Coordination, Agency Consultation
Dave Beck	Engineer	Data Acquisition, Agency Consultation
Jason Klaumann	Engineer	Data Acquisition, Agency Consultation
Sheri Lares	Environmental	Agency Environmental Review
Jeff Berglund	Senior Scientist	Western Eco Tech - Biological Assessment
Lauri Travis	Archaeologist	Metcalf Archaeological Consultants, Inc.
Lisa Schassberger	Botanist	Botanical Assessment

Appendix A

Agency Coordination Letters

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
HELENA REGULATORY OFFICE
301 SOUTH PARK, DRAWER 10014
HELENA, MONTANA 59626-0014

REPLY TO
ATTENTION OF:

RECEIVED
DEC 18 2000
ENVIRONMENTAL

December 14, 2000

RECEIVED
JAN 17 2001
BY: KLS

Helena Regulatory Office
Phone: (406) 441-1375
Fax: (406) 441-1380

Subject: Ekalaka – Alzada
PLH 323-1(11)25, Control No. 4138
Comments on Draft Biological Resources Report and Draft Environmental Assessment

Mr. Gordon Stockstad
Chief, Resources Bureau, Environmental Services
Montana Department Of Transportation
2701 Prospect Avenue
PO Box 201001
Helena, Montana 59620-1001

Dear Mr. Stockstad:

This letter provides comments from the US Army Corps of Engineers (Corps) on the Ekalaka – Alzada Draft Biological Resources Report (BRR) dated June 30, 2000 and Draft Environmental Assessment (EA) dated November, 2000. It is recognized that the first project within this corridor scheduled for construction is the Alzada-North project; however, these comments apply to all projects within the Ekalaka to Alzada corridor.

1. Isolated wetlands and other aquatic sites associated with ephemeral, intermittent or perennial streams tend to provide diverse habitat that due to the arid climate of this corridor tends to be of relatively high quality. Roadway alignments, grades and fill slopes should be selected that avoid or minimize project impacts to the aquatic environment to the greatest extent practicable. The aquatic environment includes wetlands, streams, rivers, ponds, and lakes. It will be necessary to furnish documentation of avoidance and minimization efforts when a Section 404 Clean Water Act Permit Application is made.

2. Section 3.10.3 of the Draft EA discusses the use of 3:1 or 4:1 fill slopes as an impact minimization measure. It is agreed that in this case it is not appropriate to install guardrail in an effort to minimize wetland impacts. It is recognized that guardrail can be a safety hazard and can cause maintenance problems, especially in the winter. Based on the information presented regarding recovery areas, it appears that if wetlands are less than 2 feet (0.6 m) deep, the steeper 3:1 fill slopes could be used without guardrail and without compromising the safety of the travelling public. This would avoid unnecessary wetland impacts, and would minimize the unavoidable wetland impacts. Please document the water depth in the wetlands at each of the jurisdictional wetland fills, and explain why or why not the steepest practical fill slope (i.e., 3:1) was used.

3. As mentioned in the Wetlands portion of the Draft BRR, the Corps considers roadside ditches that were excavated in an upland but have developed wetland characteristics to be non-jurisdictional, provided there is no surface water connection with a jurisdictional water. These non-jurisdictional areas should not be included in the jurisdictional wetland acreage impacted, and no mitigation will be required for impacting these areas.

4. In some areas the 10 to 15 meter horizontal alignment shift increases the jurisdictional wetland impacts associated with the project. In areas where this alignment shift increases impacts to aquatic resources, the need for the shift and the explanations of why other alternatives were not practicable must be documented. Additionally, it should be documented where the alignment shift helped avoid or minimize aquatic resource impacts. Documentation should be included with the 404 Permit Application.

5. In order for this project to qualify for a Nationwide permit, each impact to a Water of the U.S. must be kept to less than 0.50 Acres. If an impact exceeds 0.50 Acres it is likely that an Individual Permit will be required for this project, in which case the processing time for the 404 Permit will increase.

6. In some areas it may be possible to remove the existing roadway fill and create or expand wetland areas. These efforts are encouraged and will be considered as on-site and in-kind wetland mitigation credit. This sort of mitigation work has been done with success on other MDT projects.

7. Compensatory mitigation will be required for unavoidable impacts to the aquatic environment, including impacts to streams, wetlands and other aquatic resources. The US Army Corps of Engineers typically requires monitoring to ensure project success and a perpetual conservation easement for compensatory mitigation sites.

8. US Army Corps of Engineers approval of the use of the BLM Ridgeway Wetland Complex as a compensatory wetland mitigation site is not granted at this time. As of this writing the Corps has no information on this site. Please furnish information regarding this cooperative interagency mitigation project to this office.

We appreciate the chance to comment on the project at this early stage. If there are any questions please contact me at (406)441-1375.

Sincerely,

Todd N. Tillinger, P.E.
Project Manager

cc: Dale Paulsen, FHWA – Helena
Terry Yarger, MDT – Chief, Engineering Bureau, Environmental Services
Scott Jackson, USFWS – Ecological Services, Helena

cc: Jeff Berglund

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301

RECEIVED
OCT 17 2000
BY: KVS

IN REPLY TO:
MTM-059440
2800

OCT 16 2000

Terry L. Yarger, Environmental Services
Montana Department of Transportation
P. O. Box 201001
Helena, Montana 59620-1001

Dear Mr. Yarger:

We have reviewed the updated version of your draft environmental assessment for the proposed Federal-Aid Highway Project PLH 322-1(11)25 Ekalaka to Alzada Control No. 4138. We have one comment from the Miles City Field Office. Under Section 3.11.3, Paragraph 3, mitigation measures for sage grouse breeding would be to prohibit construction-related activities between the period of March 15 and May 15, or until displaying/breeding activities of the sage grouse have terminated for the year. Under BLM's standard stipulation for sage and sharp-tailed grouse, surface disturbance is prohibited from March 1 to June 15 within two miles of a lek. This standard stipulation applies only to Federal land and can be modified by BLM's authorized officer.

We appreciate the opportunity to review your updated version of the draft environmental document. If you have any questions, please contact Dalice Landers, Realty Specialist, at 406-233-2836.

Sincerely,

Fred Wambolt
Supervisory Land Use Specialist

cc: Federal Highway Administration
U. S. Department of Transportation
2880 Skyway Drive
Helena, MT 59602

Kadrmas, Lee and Jackson
Attention: T. Mike Casey
P. O. Box 80303
Billings, MT 59108

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301

RECEIVED
SEP 15 2000
BY:

IN REPLY TO:
MTM-059440
2800

SEP 14 2000

Terry L. Yarger, Engineering Services
Montana Department of Transportation
P. O. Box 201001
Helena, Montana 59620-1001

Dear Mr. Yarger:

We have reviewed the ROUGH DRAFT of your environmental assessment for the proposed Federal-Aid Highway Project PLH 322-1(11)25 Ekalaka to Alzada Control No. 4138. A copy of the comments from the specialists at the Miles City Field Office is enclosed.

The Federal Highway Administration (FHWA) will need to submit to our office a written request identifying specific tracts of lands for appropriation accompanied by a more specific map showing the location of the additional right-of-way and construction permits which will be required, a statement of its determination that the lands are necessary for the project, and a copy of the approved environmental document as provided for in the Interagency Agreement between the FHWA and the BLM.

We appreciate the opportunity to review your ROUGH DRAFT environmental document. If you have any questions, please contact Dalice Landers, Realty Specialist, at 406-233-2836.

Sincerely,

Todd S. Christensen

Todd S. Christensen
Assistant Field Manager - Resources

Enclosure

cc: Federal Highway Administration
U. S. Department of Transportation
2880 Skyway Drive
Helena, MT 59602

Kadrmas, Lee and Jackson
Attention: T. Mike Casey
P. O. Box 80303
Billings, MT 59108

MARCH 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301

RECEIVED
MAY 16 2000
BY: KLS

IN REPLY TO:
MTM-059440
2800

MAY 10 2000

Montana Department of Transportation
2701 Prospect Avenue
P. O. Box 201001
Helena, Montana 59620-1001

Dear Mr. Helvik:

Our office is willing to be a Cooperating Agency on your proposed PLH 323-1 (11)25 Ekalaka-Alzada, Control #4138 project as far as reviewing documents. The Federal land involved was issued under right-of-way MTM-059440.

The affected Federal land is being managed for multiple use but does not fit under the provisions of "Section 4(f)" of the 1966 U. S. Department of Transportation Act (49 U.S.C. 303) as you listed as parts a. through d. in your letter.

If Federal land outside the existing right-of-way will be involved, please submit a map and a written request from the Federal Highway Administration for appropriation of those lands.

If you have any questions, please contact Dalice Landers, Realty Specialist, at the above address or call at 406-233-2836.

Sincerely,

Todd S. Christensen

Todd S. Christensen
Assistant Field Manager - Resources

cc: Federal Highway Administration
U. S. Department of Transportation
2880 Skyway Drive
Helena, MT 59602

Kadrmas, Lee and Jackson
Attention: T. Mike Casey
P. O. Box 21275
Billings, MT 59104

RECEIVED
AUG 30 2000
BY: KLJ

Montana Department of
ENVIRONMENTAL QUALITY

Marc Racicot, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • E-mail: www.deq.state.mt.us

August 24, 2000

Mike Casey
Kadrmas, Lee, & Jackson
P.O. Box 80303
Billings, Montana 59108

Subject: Alzada Grocery Store LUST Trust Investigation and MDT Highway Realignment

Dear Mr. Casey:

Thank you for informing the Department of Environmental Quality (DEQ) of the upcoming realignment of the intersection of US Highway 12 and Montana Highway 323 in Alzada. The DEQ received your map illustrating the proposed centerline and construction limits of Highway 323 on July 6, 2000. Leaking underground storage tank (LUST) Trust investigations were performed at the Alzada Grocery Store from 1994 through 1997. The investigations, which included the emplacement of six testholes and the construction of four monitoring wells, identified petroleum hydrocarbons in the vicinity of the former underground storage tank (UST) pit and the former dispenser island. Field screening and laboratory analytical results indicated that soil contamination was present from 7.5 to 15 feet below ground surface (bgs) in the vicinity of the former UST system. Field screening did not identify the presence of petroleum contamination from ground surface to five feet bgs in any of the testholes. Fluid level measurements indicate that depth to water ranged from 10 to 13 feet bgs.

The four monitoring wells and the water supply well servicing the Alzada grocery were abandoned in 1997. Although no current LUST Trust work at this site is scheduled, the DEQ may perform investigations of ground water quality in the future. It does not appear that the proposed realignment of the intersection will negatively affect any additional investigation, if deemed necessary.

The DEQ must be notified within 24 hours of the discovery of any petroleum contamination discovered during the construction activities. Remedial measures required, if any, will be determined based on the magnitude and extent of residual contamination encountered. We appreciate receiving the advance notice of the highway realignment. Please contact me at (406) 444-1413 with any questions regarding this project.

Sincerely,

Tom Henderson
Environmental Specialist

cc: Stan Sternberg, MDT Environmental Services, P.O. Box 201001, Helena, MT 59620-1101

Enclosure: Realignment map 7/6/00
G:\HWC\PRS\Lust_Trust\Alzada\MCasey.doc

Centralized Services Division • Enforcement Division • Permitting & Compliance Division • Planning, Prevention & Assistance Division • Remediation Division

Montana Department of
ENVIRONMENTAL QUALITY

Marc Racicot, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • E-mail: www.deq.state.mt.us

RECEIVED
MAY 30 2000
BY: KLS

May 25, 2000

T. Mike Casey
Kadrmas Lee and Jackson
1500 Poly Drive
PO Box 21275
Billings, MT 59104

Subject: Project Number PLH 323-1 (11)25
Ekalaka-Azada
Control No. 4138

Dear Mr. Casey:

Your letter concerning the above referenced project was forwarded to me. Our data, at this time, does not have specific location information for the underground storage tanks and the petroleum release sites in Montana. I can only give you general location information. I have attached a list of all the underground storage tanks that remain in the ground in Carter County. I have also included all the petroleum releases that have occur in Carter County. There is an "Active Release" column that indicates whether or not the release investigation and cleanup is continuing.

If you would like more detail information or have any additional questions, please call our office at (406) 444-1420.

Sincerely,

Sharon M. Burt

Sharon M. Burt
Information Services Manager

Enclosures

County	City	AltFacilityID	Facility Description	Facility Name	Street Address	AltTankID	TankStatusDe	ClosureStatusDesc	TankCapacity	SubstanceD
Carter	Alzada	0-610229	Gas Station	Valley Inn	Hwy 212 Mile Marker 37	1	Currently In Use		2000	Diesel
Carter	Alzada	0-610229	Gas Station	Valley Inn	Hwy 212 Mile Marker 37	2	Currently In Use		4000	Gasoline
Carter	Alzada	0-610229	Gas Station	Valley Inn	Hwy 212 Mile Marker 37	3	Currently In Use		4000	Gasoline
Carter	Alzada	0-613906	Gas Station	B & J's Convenience Store	Walker Minor Subdivision Highway 212	1	Currently In Use		8000	Gasoline
Carter	Alzada	0-613906	Gas Station	B & J's Convenience Store	Walker Minor Subdivision Highway 212	2	Currently In Use		4000	Diesel
Carter	Ekalaka	0-600863	Local Government	Hospital/Courthouse	101 Park St	S3	Currently in Use		6000	Heating Oil
Carter	Ekalaka	0-601222	Residential	Lambert, Marshall	Morman St Box 52	S1	Permanently Out of Use	Tank closed in place	300	Diesel
Carter	Ekalaka	0-601437	Commercial	Wear Hardware Company	410 Main St	S1	Permanently Out of Use	Tank closed in place	300	Heating Oil
Carter	Ekalaka	0-601437	Commercial	Wear Hardware Company	410 Main St	S2	Permanently Out of Use	Tank closed in place	300	Heating Oil
Carter	Ekalaka	0-601437	Commercial	Wear Hardware Company	410 Main St	S3	Permanently Out of Use	Tank closed in place	300	Heating Oil
Carter	Ekalaka	0-601681	Gas Station	Fruit Service & Repair	Main St	3	Currently in Use		1000	Gasoline
Carter	Ekalaka	0-601681	Gas Station	Fruit Service & Repair	Main St	4	Currently in Use		1000	Gasoline
Carter	Ekalaka	0-601681	Gas Station	Fruit Service & Repair	Main St	5	Currently in Use		1000	Diesel
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	1	Temporarily Out of Use		550	Diesel
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	2	Temporarily Out of Use		10148	Gasoline

County	City	AltFacilityID	Facility Description	Facility Name	Street Address	AltTankID	TankStatusDe	ClosureStatusDesc	TankCapacity	SubstanceD
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	3	Temporarily Out of Use		6016	Gasoline
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	4	Temporarily Out of Use		7519	Diesel
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	5	Temporarily Out of Use		7519	Diesel
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	6	Temporarily Out of Use		6035	Gasoline
Carter	Ekalaka	0-602392	Gas Station	Silvis Conoco	Mormon & Speelmon	7	Temporarily Out of Use		550	Gasoline
Carter	Ekalaka	0-603234	Gas Station	Fruit Service & Repair	S Hwy 323	6	Currently In Use		5565	Diesel
Carter	Ekalaka	0-603234	Gas Station	Fruit Service & Repair	S Hwy 323	7	Currently In Use		4590	Diesel
Carter	Ekalaka	0-603234	Gas Station	Fruit Service & Repair	S Hwy 323	8	Currently In Use		2365	Gasoline
Carter	Ekalaka	0-603234	Gas Station	Fruit Service & Repair	S Hwy 323	9	Currently In Use		9627	Gasoline
Carter	Ekalaka	0-604710	School	Ekalaka Elementary School	102 Park St	S2	Currently in Use		6000	Heating Oil

City	AltEventID	Date	SiteName	Location	Active Release
Alzada	0602931*2527	2/21/1995	ALZADA GARAGE	HWY 212	Yes
Alzada	0607791*3461	9/22/1997	USAF B-1B Bomber Crashsite	25 Miles N of Alzada	Yes
Alzada	0610229*3775	6/23/1999	Valley Inn	Hwy 212 Mile Marker 37	No
Alzada	0612645*1112	3/9/1992	Alzada Grocery	Corner of Hwy 212 and County Road 323	No
Boyes	0610896*1524	12/17/1992	OLD WEST TRADING POST	HWY 212 BOX 128	Yes
Ekalaka	0600863*557	1/4/1991	HOSPITAL/COURTHOUSE	101 PARK ST	Yes
Ekalaka	0603333*576	11/13/1990	BRAD MCCABE	10 Miles South of Ekalaka	No
Ekalaka	0604710*801	6/28/1991	EKALAKA ELEMENTARY SCHOOL	102 PARK ST	Yes
Mill Iron	0604114*2397	10/5/1994	MILL IRON RESTAURANT	20 miles Southeast of Ekalaka; 6 miles west of South Dakota border	Yes

RECEIVED
MAY 30 2000
BY: KLJ

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
BILLINGS WATER RESOURCES REGIONAL OFFICE

MARC RACICOT, GOVERNOR

AIRPORT INDUSTRIAL PARK
1371 RIMTOP DRIVE

STATE OF MONTANA

(406) 247-4415
(406) 247-4416 (FAX)

BILLINGS, MONTANA 59105-1978

May 24, 2000

Kadrmas Lee & Jackson
Attn: Mike Casey, Project Coordinator
1500 Poly Drive
Billings, MT 59104

Re: Project Number PLH 323-1 (11)25
Ekalaka-Alzada
Control No. 4138

Dear Mike,

After reviewing your proposed project for the Montana Department of Transportation, we must remind you that your office, and the DOT, must comply with all the Department of Natural Resources and Conservation regulations and permit procedures. The proper permits must be applied for before construction can begin.

We are willing to cooperate with your office in anyway possible. If you have further questions, I will be happy to speak to you. You may reach me at 247-4415.

Sincerely,

Keith Kerbel
Regional Manager
Billings Regional Office

"AN EQUAL OPPORTUNITY EMPLOYER"

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
BILLINGS WATER RESOURCES REGIONAL OFFICE

MARC RACICOT, GOVERNOR

AIRPORT INDUSTRIAL PARK
1371 RIMTOP DRIVE

STATE OF MONTANA

(406) 247-4415
(406) 247-4416 (FAX)

BILLINGS, MONTANA 59105-1978

T. Mike Casey
Kadrmas, Lee & Jackson
P O Box 21275
Billings, MT 59104

Dear Mr. Casey:

Thank you for providing information for the proposed Ekalaka-Alzada road project. (PLH323-1 {11}25)

Water requirements and availability need to be considered for road projects. Too often contractors start working and source(s) of water have not been determined.

Enclosed is Water Use Permit Form 600 as well as a booklet regarding water rights in Montana. (see page 12)

Sincerely,
Dave Roberts
Dave Roberts
Water Resources Specialist

P.S. Please contact Marty VanCleave at 247-4422 for assistance.

"AN EQUAL OPPORTUNITY EMPLOYER"

DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION
MILES CITY

MARC RACICOT, GOVERNOR

TELEFAX: (406) 232-3807
321 MAIN STREET

STATE OF MONTANA

EASTERN LAND OFFICE
PO BOX 1794
MILES CITY, MT 59301-1794
(406) 232-2034 OR 2045

CONSERVATION & RESOURCE DEVELOPMENT DIVISION
PO BOX 276
MILES CITY, MT 59301-0276
(406) 232-6359 OR 6460

RECEIVED
MAY 15 2000
BY:

May 9, 2000

T. Mike Casey
Project Coordinator
Kadrmas, Lee, and Jackson
PO Box 21275
Billings, MT 59104

Subject: Project Number PLH 323-1 (11)25; Ekalaka-Alzada; Control No. 4138

Dear Mr. Casey:

In response to your recent letter, I've reviewed the plan map and it does not appear that any State lands will be directly impacted by this project. The following responses are to your specific questions:

- There are no known cultural sites or concerns for State lands adjacent to this proposed project.
- There are no active mineral leases or mining activities in the project vicinity.
- No specific leases or lands are present that should be adversely impacted.
- No merchantable timber is present.
- The Little Missouri River is not on our list of navigable waterways and no easement or license should be needed from our agency.
- We are not aware of any lands that have present or planned usage under *Section 4(f)* of the 1966 *Department of Transportation Act* (49 U.S. C. 330). There are also no sites eligible for inclusion, or in the National Register of Historic Places (under *Section 106* of the *National Historic Preservation Act*, 16 U.S.C.470.
- We have no record of any land in the project vicinity having been purchased or administered for recreational purposes under *Section 6(f)* of the *National Land & Water Conservation Act* (16 U.S.C. 460).

Thank you for contacting us to be a cooperating agency. If you need any additional information please feel free to contact me.

Sincerely,

Sharon Moore

Sharon Moore
Land Use Specialist

"AN EQUAL OPPORTUNITY EMPLOYER"

MARC RACICOT
GOVERNOR

MONTANA
DEPARTMENT OF AGRICULTURE

AGRICULTURAL SCIENCES DIVISION
303 N ROBERTS, PO BOX 200201
HELENA, MT 59620-0201

W. RALPH PECK
DIRECTOR
(406) 444-3144
FAX (406) 444-5409
TDD (406) 444-4687
E-MAIL: agr@state.mt.us

GARY GINGERY
ADMINISTRATOR
(406) 444-2944
(406) 444-7336

RECEIVED
MAY 19 2000
BY: MS

May 17, 2000

T. Mike Casey
Kadrmas Lee & Jackson
P.O. Box 21275
Billings, MT 59104

RE: Project Number PLH 323-1 (11)25 - Ekalaka- Alzada - Control No. 4138

Dear Mr. Casey:

Thank you for the opportunity to comment on the above referenced highway project. It is important that all projects of this nature consider the impacts from noxious weeds. I have enclosed a current Montana noxious weed list. As you are aware, section 7-22-2152 MCA of the County Noxious Weed Control Act requires that a written weed management plan be incorporated into the plans for this project. I suggest that you work closely with Bud Powell, Carter County Weed Supervisor, and Larry Brence, Fallon-Carter County Extension Agent, in the development of this plan.

Sincerely,

Gary Gingery
Administrator

cc: Bud Powell
Carter Co. Weed District
P.O. Box 315
Ekalaka, MT 59324
(406)775-6278

Larry Brence
Fallon-Carter Co. Extension
P.O. Box 850
Baker, MT 59313-0850
(406)778-7110

GCIU 275C Pit Printers

Mid-Rivers Telephone Cooperative, Inc.

P.O. Box 280, 106 Second Avenue South
Circle, Montana 59215
Phone: (406) 485-3301
Fax: (406) 485-2924

RECEIVED
MAY 25 2000
BY: KLJ

May 17, 2000

Mr. T. Mike Casey
Kadrmas, Lee & Jackson, P.C.
P. O. Box 21275
Billings, MT 59104

RE: Project Number PLH 323-1 (11)25
Ekalaka-Alzada
Control No. 4138

Mr. Casey:

Mid -Rivers Telephone Cooperative has completed a preliminary review of its facilities records with respect to the above referenced project.

Our review indicates that Mid-Rivers facilities currently exist east of Highway 323 beginning at RP 24.8 and paralleling the road for approximately three miles. The facilities consist of one twelve pair copper mainline cable and one two pair copper drop cable.

Shifting the road alignment 33 feet to the west should cause only minimal conflict with the existing Mid-Rivers facilities. It will be necessary to reroute or lower the existing twelve pair cable in at least one location. The existing two pair cable will also be in conflict requiring either rerouting or lowering.

Our records indicate that at least seven drainage culverts exist along this road segment. Removal and replacement of these culverts may or may not cause conflicts with existing facilities depending on actual construction plans.

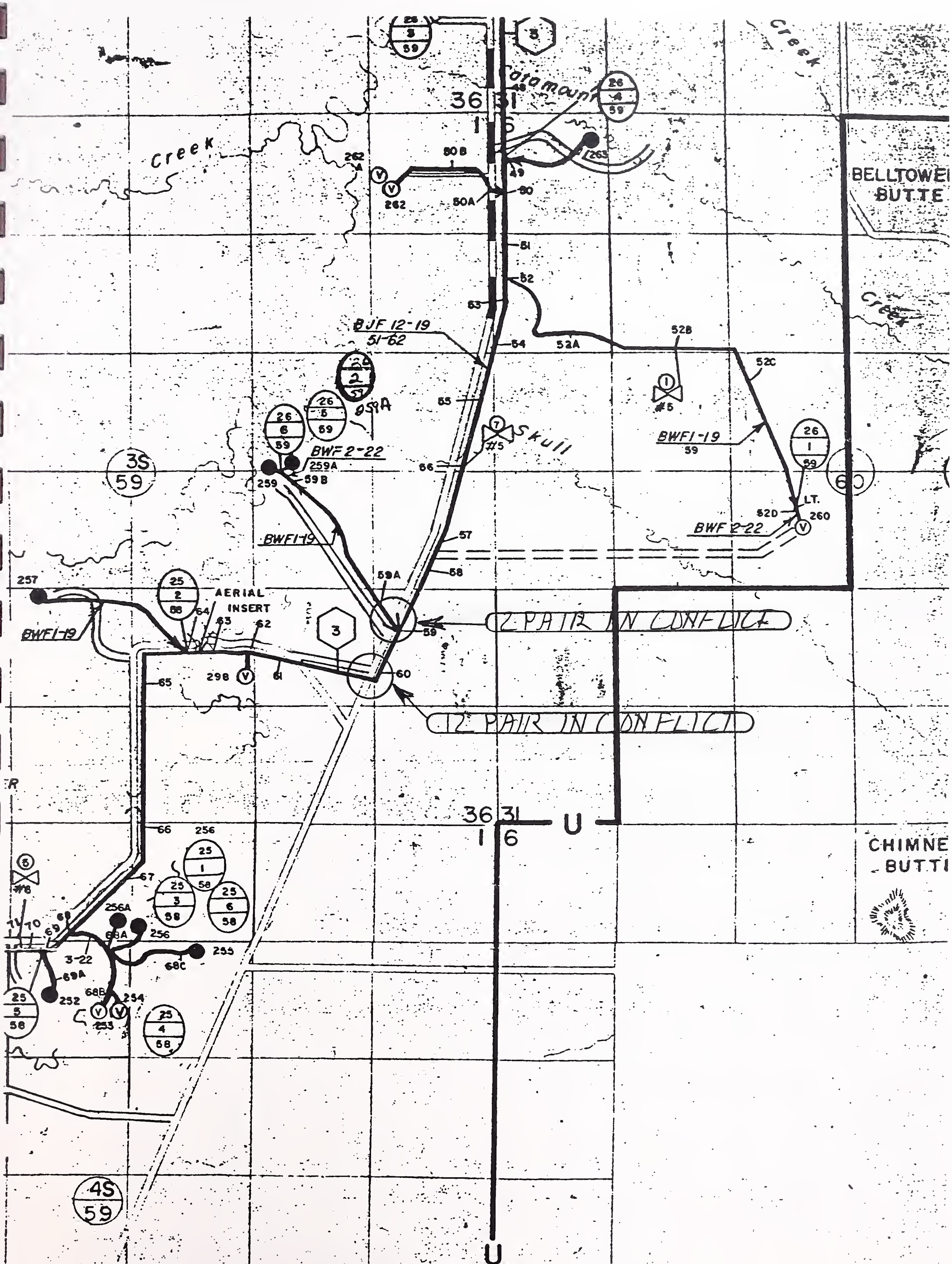
A map showing the location of our existing facilities with obvious conflicts is enclosed.

Please contact either Greg Ugrin or myself at 687-3336 should you require any additional information concerning this matter. We look forward to working with you .

Rocky Long

Rocky Long
Plant Manager

Enclosures

25
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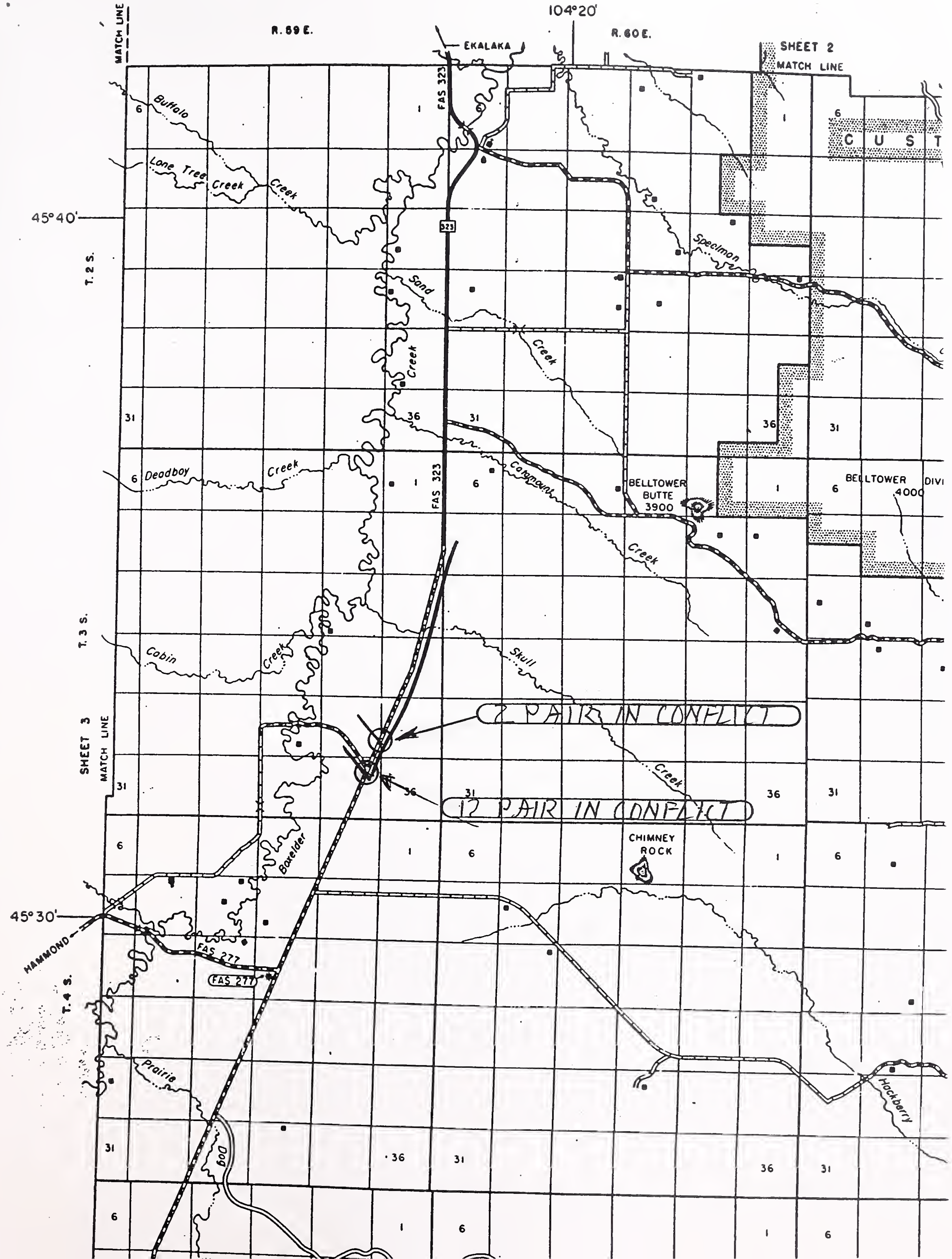


2 PAIR IN CONFLICT

12 PAIR IN CONFLICT

Appendix B

General Characteristics of Wetlands Along the Ekalaka-Alzada Project

TABLE VII - GENERAL CHARACTERISTICS OF WETLANDS ALONG THE EKALAKA - ALZADA PROJECT

Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category[2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
1	T9S,R60E,S 30	emergent scrub-shrub	III	542	542	Y	Snowmelt / stormwater runoff.	Excavated roadside borrow ditch with shrub component.
2	T9S,R60E,S 19	emergent	IV	0	256	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
3	T9S,R60E,S 19	emergent	IV	22	22	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
4	T9S,R60E,S 6	emergent scrub-shrub	III	61	611	Y	Snowmelt / stormwater runoff and seepage from ag. field.	Excavated roadside borrow ditch with shrub component.
5	T9S,R60E,S 5	emergent	IV	1,020	1,020	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
6	T8S,R60E,S 32	emergent forested	III	260	816	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Fivemile Creek.
7	T8S,R60E,S 33	emergent	III	546	2,013	Y	Snowmelt / stormwater runoff and possible high groundwater.	Wetlands associated with a broad alkali flat (west of highway) and borrow ditch (east of highway) that apparently floods over the highway.
8	T8S,R60E,S 33	emergent	IV	59	116	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
9	T8S,R60E,S 28	emergent	IV	812	1,075	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom and borrow ditches.
10	T8S,R60E,S 27	emergent	III	1,916	4,438	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Sevenmile Creek, including those within the creek channel and borrow ditches as well as broad adjacent seep areas west of the highway.
11a	T8S,R60E,S 22	emergent	IV	69	103	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
11b	T8S,R60E,S 22	emergent	IV	25	38	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
12	T8S,R60E,S 22	emergent	IV	39	39	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
13	T8S,R60E,S 22	emergent	IV	72	246	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
14a	T8S,R60E,S 22	emergent	IV	355	556	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.

Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category[2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
14b	T8S,R60E,S 22	emergent	IV	4	1,015	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
15	T8S,R60E,S 22	emergent	IV	181	367	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
16a	T8S,R60E,S 23	emergent	IV	181	318	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
16b	T8S,R60E,S 23	emergent	IV	122	199	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
17	T8S,R60E,S 14	emergent forested	III	921	2,820	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Ninemile Creek.
18a	T8S,R60E,S 11	emergent	IV	57	57	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
18b	T8S,R60E,S 11	emergent	IV	445	932	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
19	T8S,R60E,S 12	emergent	IV	400	1,200	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
20	T8S,R61E,S 7	emergent	IV	0	25	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
21	T8S,R61E,S 6	emergent	IV	40	180	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
22	T7S,R61E,S 31	emergent aquatic bed	III	2,300	13,876*	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with the large Twelvemile Creek complex. This site provides excellent wildlife habitat for several species.
23	T7S,R61E,S 32	emergent	III	1,610	6,426*	Y	Snowmelt / stormwater runoff and groundwater.	Wetlands associated with a broad coulee bottom.
24	T7S,R61E,S 29	emergent	III	840	3,366*	Y	Snowmelt / stormwater runoff and groundwater.	Wetlands associated with a broad coulee bottom and dammed stockponds (little surface water during survey).
25	T7S,R61E,S 30	emergent	III	2,540	7,100	Y	Snowmelt / stormwater runoff and groundwater.	Wetlands associated with apparent historic Little Missouri River channel; now confined to broad swale.
26	T7S,R61E,S 30	emergent scrub-shrub	III	590	1,650	Y	Snowmelt / stormwater runoff and alluvial flow.	Narrow wetland stringers associated with both banks of the Little Missouri River.
27a	T7S,R60E,S 24	emergent forested	III	240	660	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with North Butte Creek.

Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category[2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
27b	T7S,R60E,S 24	emergent forested	III	50	400	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with North Butte Creek.
27c	T7S,R60E,S 23	emergent aquatic bed	III	0	2,750	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with North Butte Creek; surface water seems to remain for longer periods in this section, providing wildlife habitat.
28	T7S,R60E,S 24	emergent	IV	700	1,540	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
29	T7S,R60E,S 10	emergent	IV	100	100	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
30	T6S,R59E,S 25	emergent	IV	660	660	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
31	T6S,R59E,S 25	emergent	IV	300	650	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
32	T6S,R59E,S 25	emergent	IV	25	55	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
33a	T6S,R59E,S 25	emergent	IV	150	320	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
33b	T6S,R59E,S 25	emergent	IV	270	580	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
34	T6S,R59E,S 23	emergent	IV	56	56	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
35	T6S,R59E,S 14	emergent	IV	150	150	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
36	T6S,R59E,S 10	emergent	IV	1,300	1,300	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
37	T6S,R59E,S 3	emergent	IV	370	750	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
38	T6S,R59E,S 3	emergent	IV	300	2,750	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
39a	T6S,R59E,S 3	emergent	IV	700	1,500	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
39b	T6S,R59E,S 3	emergent	IV	590	650	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.

Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category [2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
40	T5S,R59E,S 31	emergent aquatic bed	III	0	2,000*	Y	Snowmelt / stormwater runoff.	Wetlands associated with a small stockpond.
41	T5S,R59E,S 31	emergent	IV	0	1,750*	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
42	T5S,R59E,S 30	emergent	III	0	900*	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Hawksnest Creek.
43	T5S,R59E,S 19	emergent	IV	190	400	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
44	T5S,R59E,S 20	emergent	III	0	120	Y	Snowmelt / stormwater runoff and subsurface seepage from upslope dike.	Wetlands resulting from extensive dike placement designed to capture surface runoff for agricultural use.
45a	T5S,R59E,S 17	emergent	IV	1,035	1,035	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
45b	T5S,R59E,S 17	emergent	IV	1,035	1,035	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
46	T5S,R59E,S 17	emergent aquatic bed	III	975	975	Y	Snowmelt / stormwater runoff.	Wetlands associated with a small stockpond.
47	T5S,R59E,S 8	emergent	IV	90	200	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
48a	T5S,R59E,S 5	emergent aquatic bed	III	1,495	5,230	Y	Snowmelt / stormwater runoff and alluvial flow (Prairie Dog Creek).	Large reservoir fed by Prairie Dog Creek and another small, unnamed drainage. Site is used extensively by waterfowl and shorebirds.
48b	T5S,R59E,S 5	emergent aquatic bed	III	650	1,960	Y	Snowmelt / stormwater runoff.	Wetlands associated with a small stockpond.
49a	T5S,R59E,S 5	emergent aquatic bed	III	60	120	Y	Snowmelt / stormwater runoff.	Wetlands associated with a small stockpond.
49b	T5S,R59E,S 5	emergent	IV	25	76	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
50	T4S,R59E,S 28/33	emergent	III	370	800	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Prairie Dog Creek.
50a	T4S,R59E,S 21	emergent	IV	320	320	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
50b	T4S,R59E,S 21	emergent	IV	495	495	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.

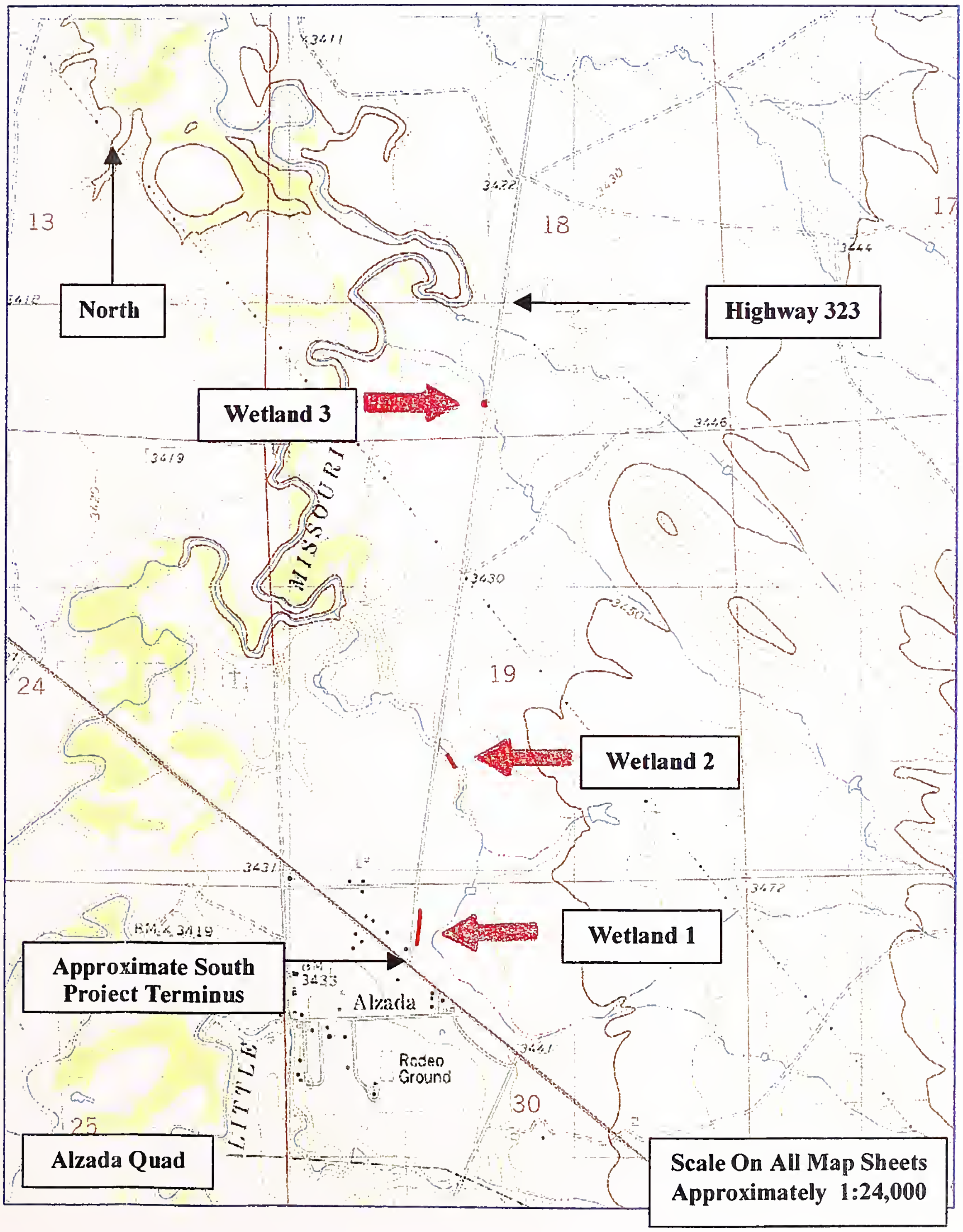
Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category[2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
51a	T4S,R59E,S 21	emergent	IV	200	686	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
51b	T4S,R59E,S 21	emergent	IV	80	80	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
52	T4S,R59E,S 21	emergent	IV	295	640	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
53	T4S,R59E,S 22	emergent	IV	160	350	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
54	T4S,R59E,S 15	emergent	IV	940	940	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
55a	T4S,R59E,S 15	emergent	IV	195	420	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
55b	T4S,R59E,S 15	emergent	IV	50	50	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
56	T4S,R59E,S 15	emergent	IV	200	238	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
57a	T4S,R59E,S 10	emergent	IV	65	86	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
57b	T4S,R59E,S 10	emergent	IV	140	140	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
58a	T4S,R59E,S 10	emergent	IV	20	20	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
58b	T4S,R59E,S 10	emergent aquatic bed	III	250	490	Y	Snowmelt / stormwater runoff.	Wetlands associated with a small stockpond.
59a	T4S,R59E,S 2	emergent	IV	100	124	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
59b	T4S,R59E,S 2	emergent	IV	46	46	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
60a	T4S,R59E,S 2	emergent	IV	360	790	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
60b	T4S,R59E,S 2	emergent	IV	25	45	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.

Site	Legal Description	Cowardin Classes[1]	MDT Wetland Rating Category[2]	Approx. Projected Impacts (square meters)	Approximate Area (square meters) Within Survey Corridor	Likely Jurisdictional?	Primary Source of Wetland Hydrology	Narrative Description
61	T3S,R59E,S 35	emergent	IV	170	370	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
62a	T3S,R59E,S 35	emergent	IV	70	150	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
62b	T3S,R59E,S 35	emergent	IV	220	220	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
63	T3S,R59E,S 35	emergent	IV	120	266	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
64a	T3S,R59E,S 25	emergent	IV	80	104	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
64b	T3S,R59E,S 25	emergent	IV	12	12	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
64c	T3S,R59E,S 25	emergent	IV	15	24	N	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
65a	T3S,R59E,S 25	emergent	IV	85	180	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
65b	T3S,R59E,S 25	emergent	IV	90	195	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
66	T3S,R59E,S 24	emergent	IV	45	54	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
67	T3S,R59E,S 24	emergent	IV	60	79	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
68	T3S,R59E,S 24	emergent	IV	210	458	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
69	T3S,R59E,S 13	emergent	III	555	1,206	Y	Snowmelt / stormwater runoff and alluvial flow.	Wetlands associated with Skull Creek and an unnamed ephemeral tributary east of the highway.
70	T3S,R59E,S 13	emergent	IV	60	165	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
71	T3S,R59E,S 13	emergent	IV	250	500	Y	Snowmelt / stormwater runoff.	Minor wetland pockets associated with ephemeral channel bottom.
72	T3S,R60E,S 7	emergent	IV	145	310	Y	Snowmelt / stormwater runoff.	Minor wetland pockets (depressions) within or adjacent to excavated roadside borrow areas.
TOTALS:				34,043	93,147			

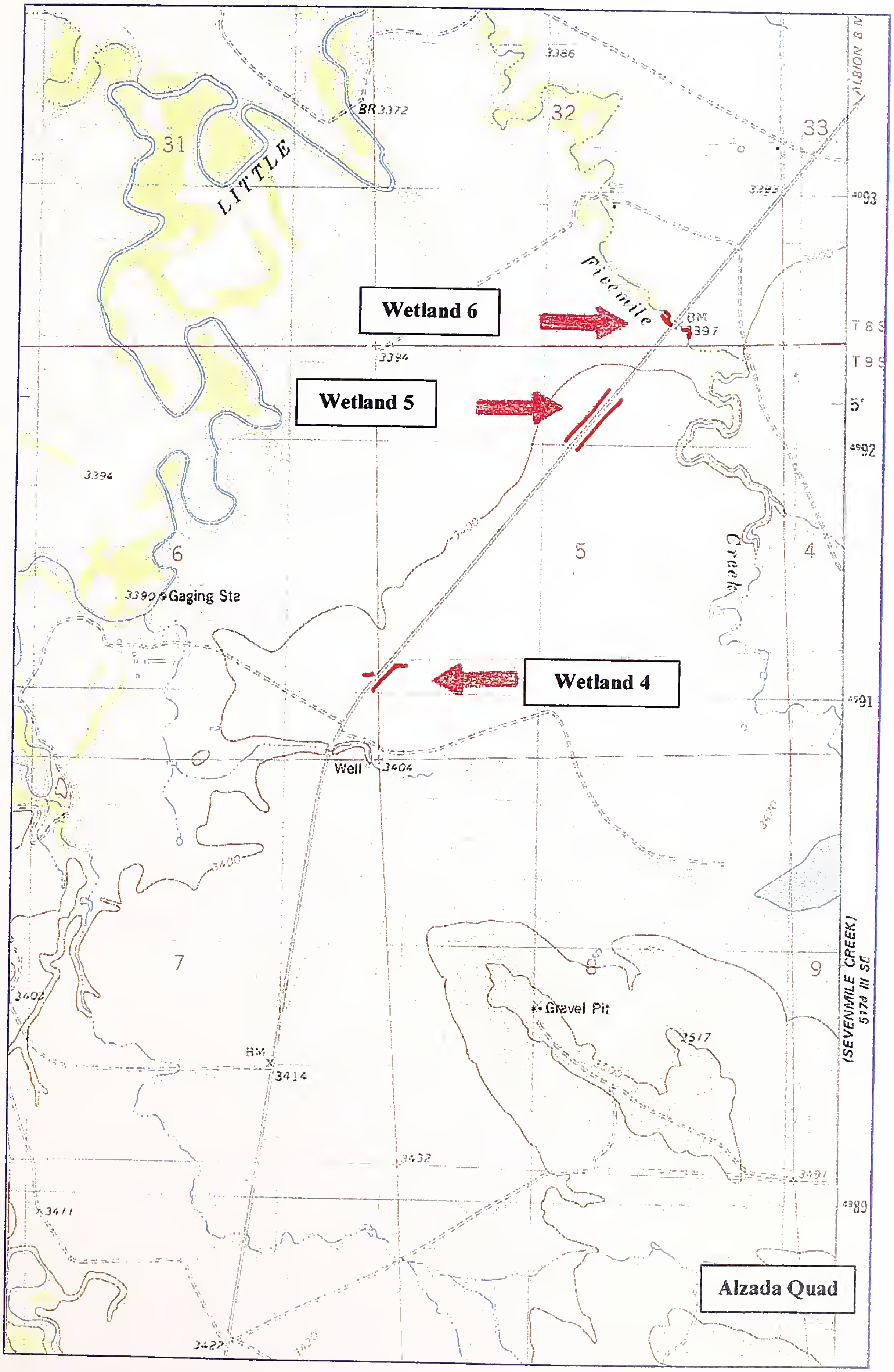
Appendix C

Wetlands Maps

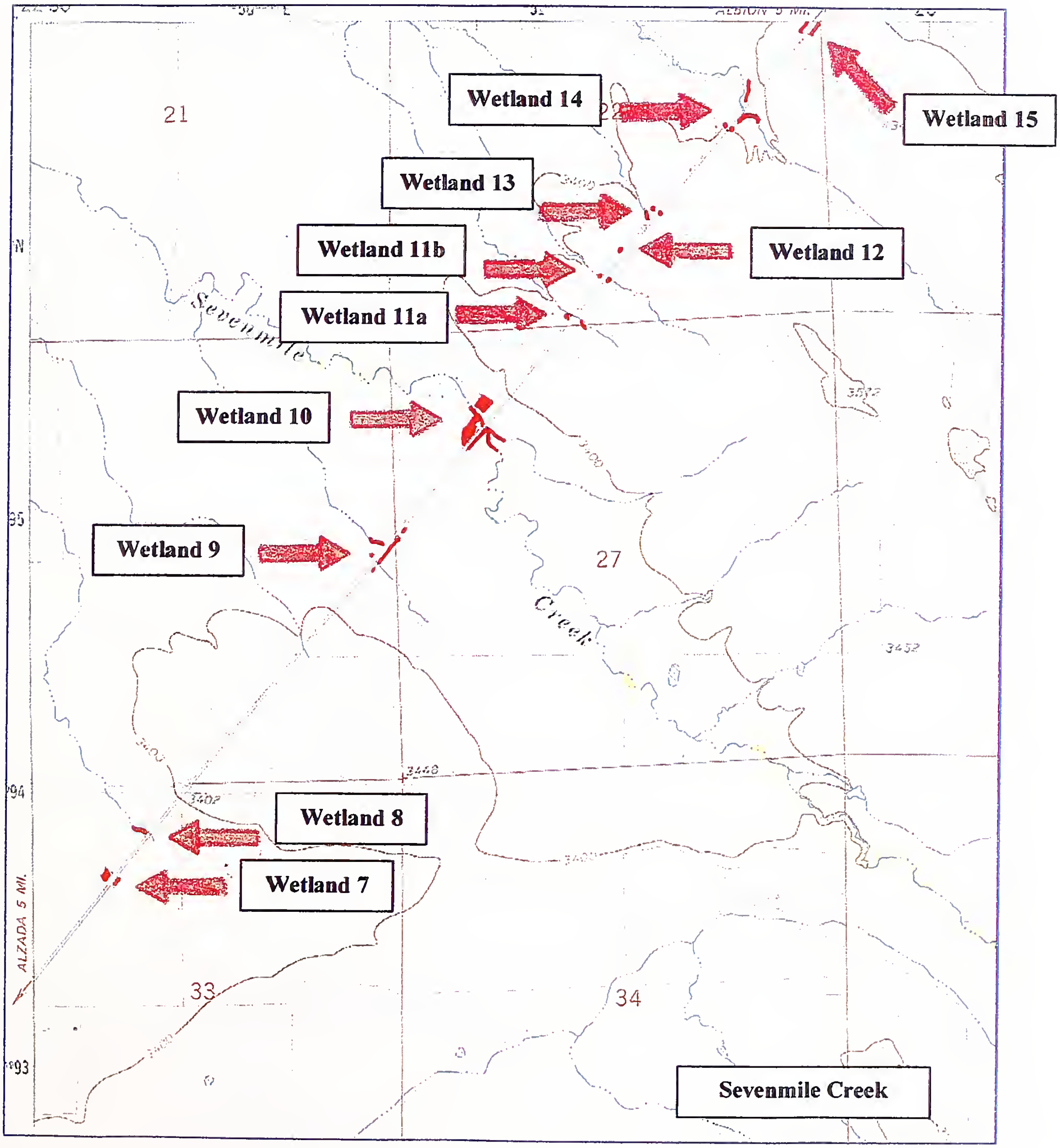
Ekalaka – Alzada Project Wetland Locations: Map Sheet 1 of 14



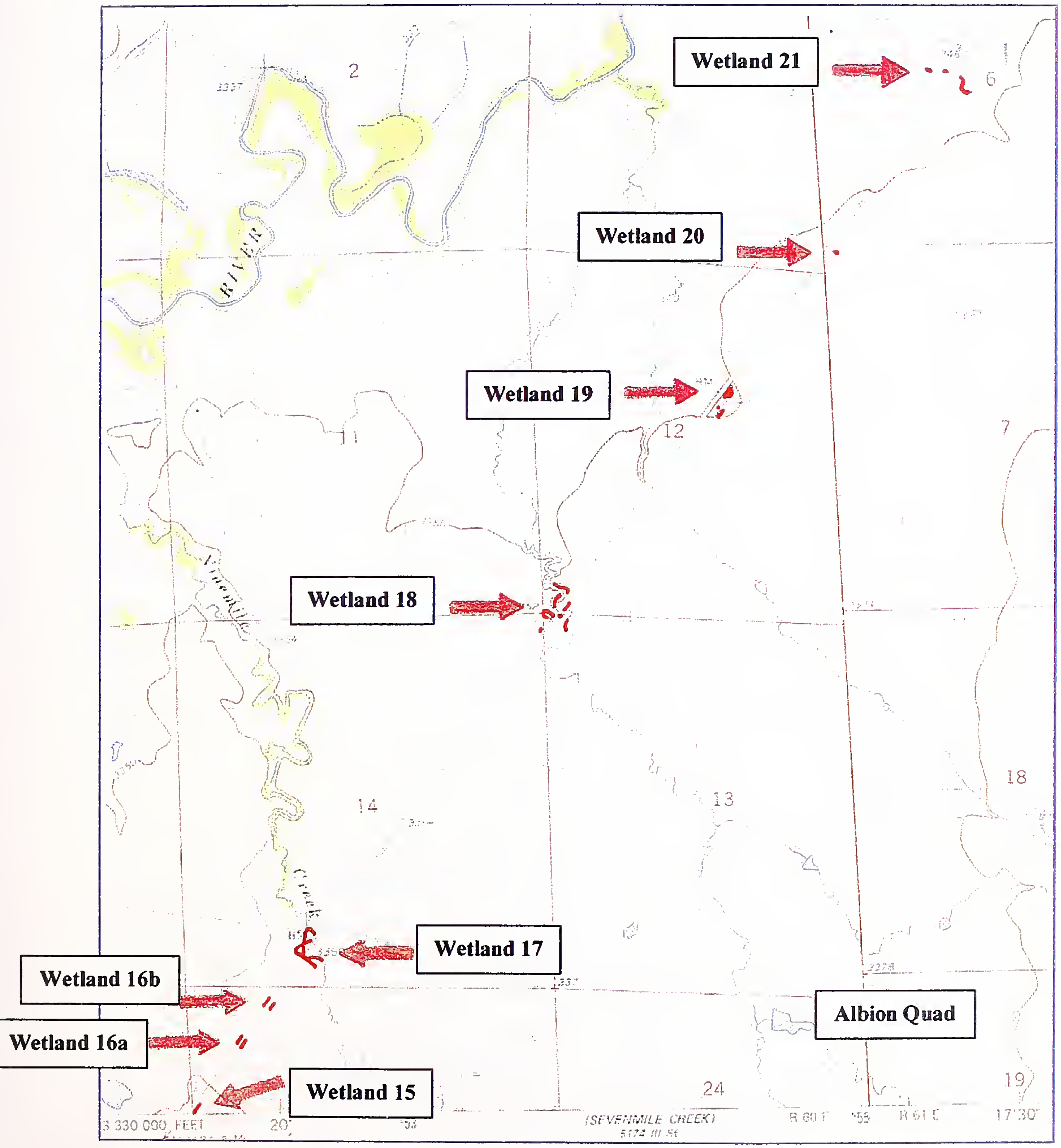
Ekalaka – Alzada Project Wetland Locations: Map Sheet 2 of 14



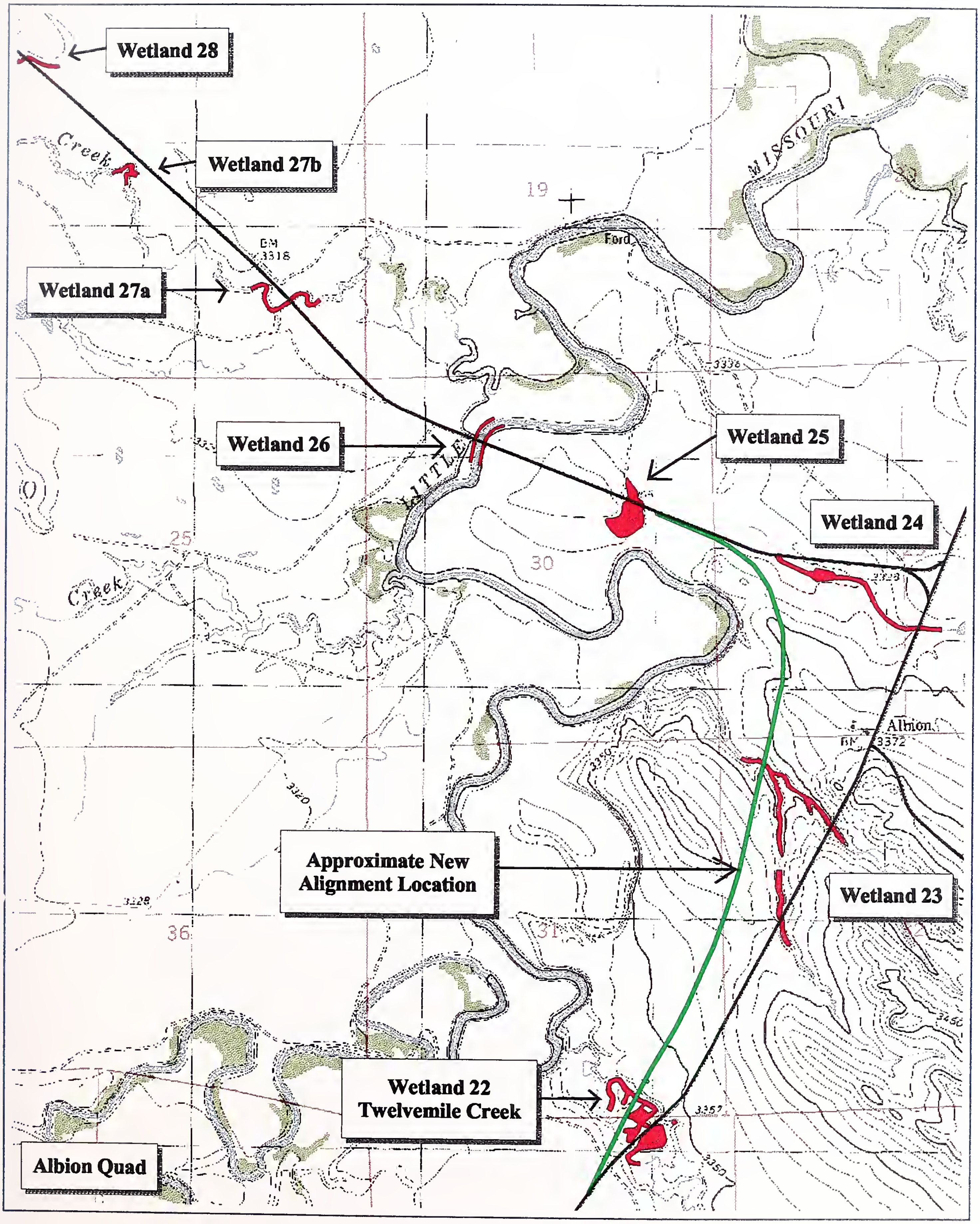
Ekalaka – Alzada Project Wetland Locations: Map Sheet 3 of 14



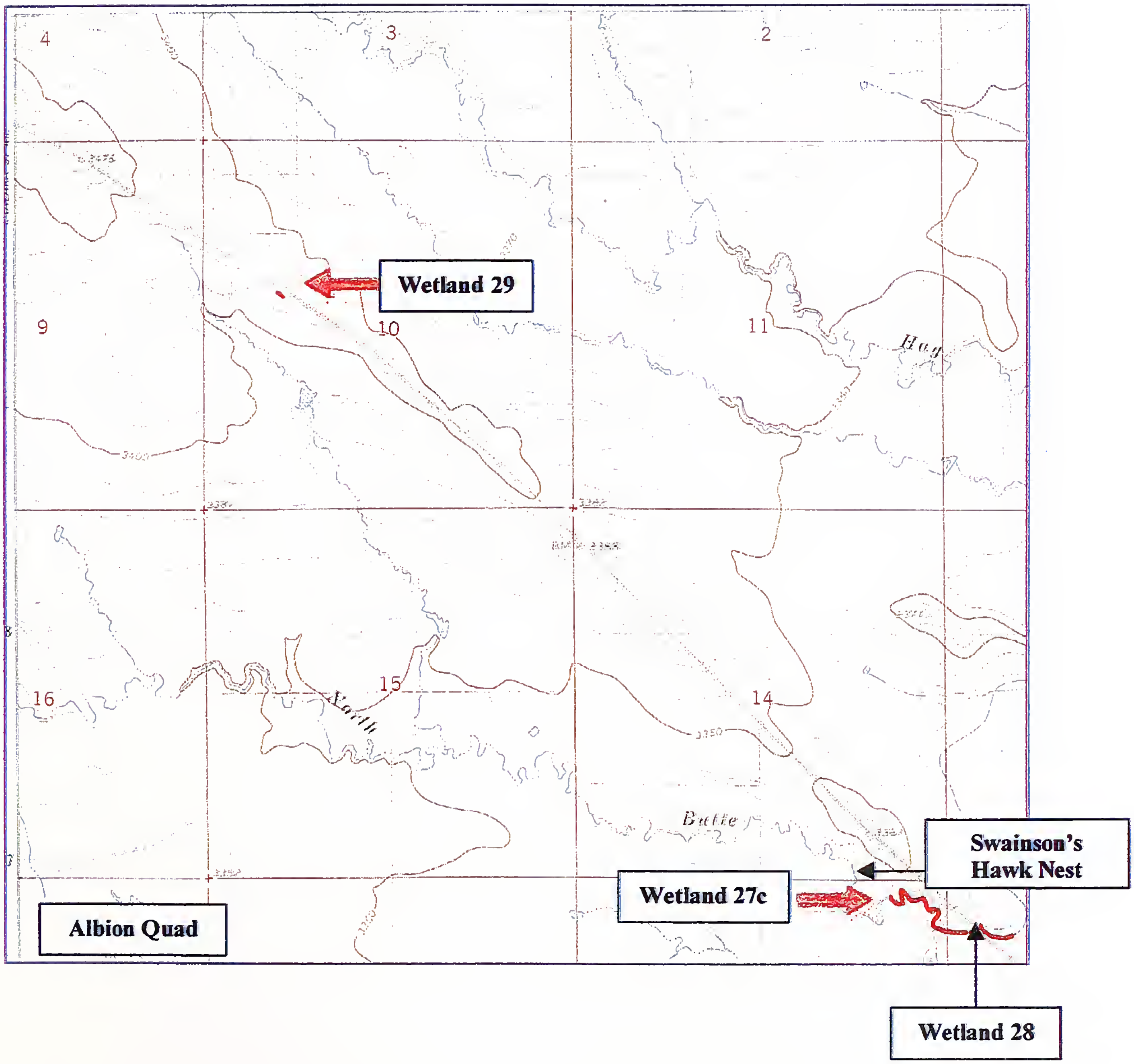
Ekalaka – Alzada Project Wetland Locations: Map Sheet 4 of 14



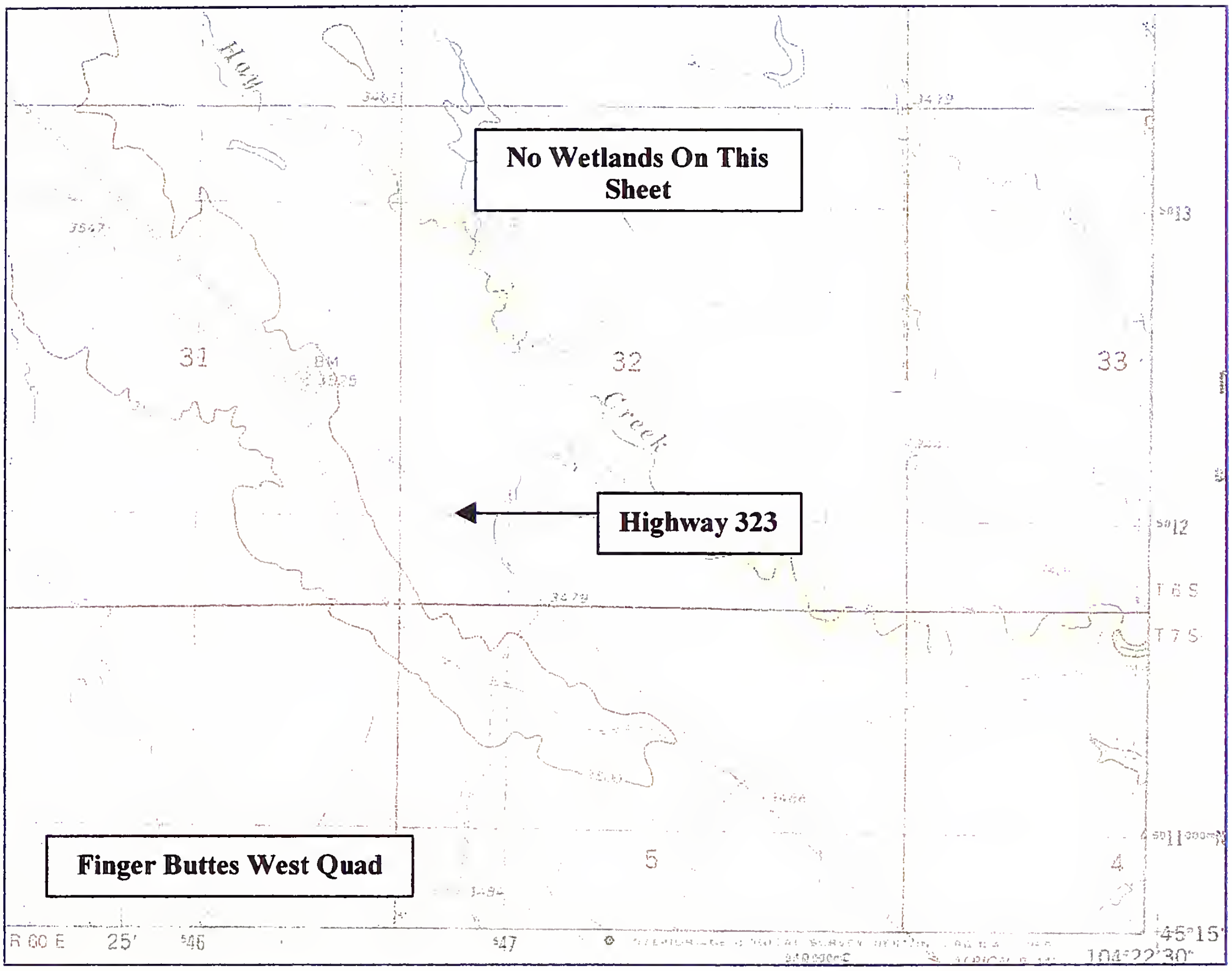
Ekalaka-Alzada Project Wetland Locations: Map Sheet 5 of 14

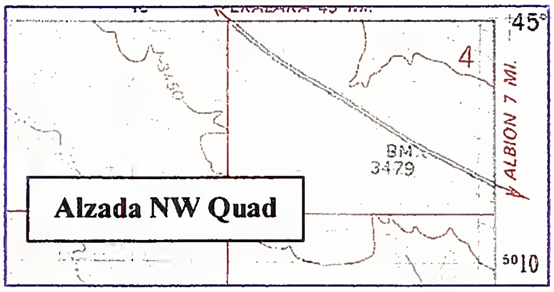


Ekalaka – Alzada Project Wetland Locations: Map Sheet 6 of 14

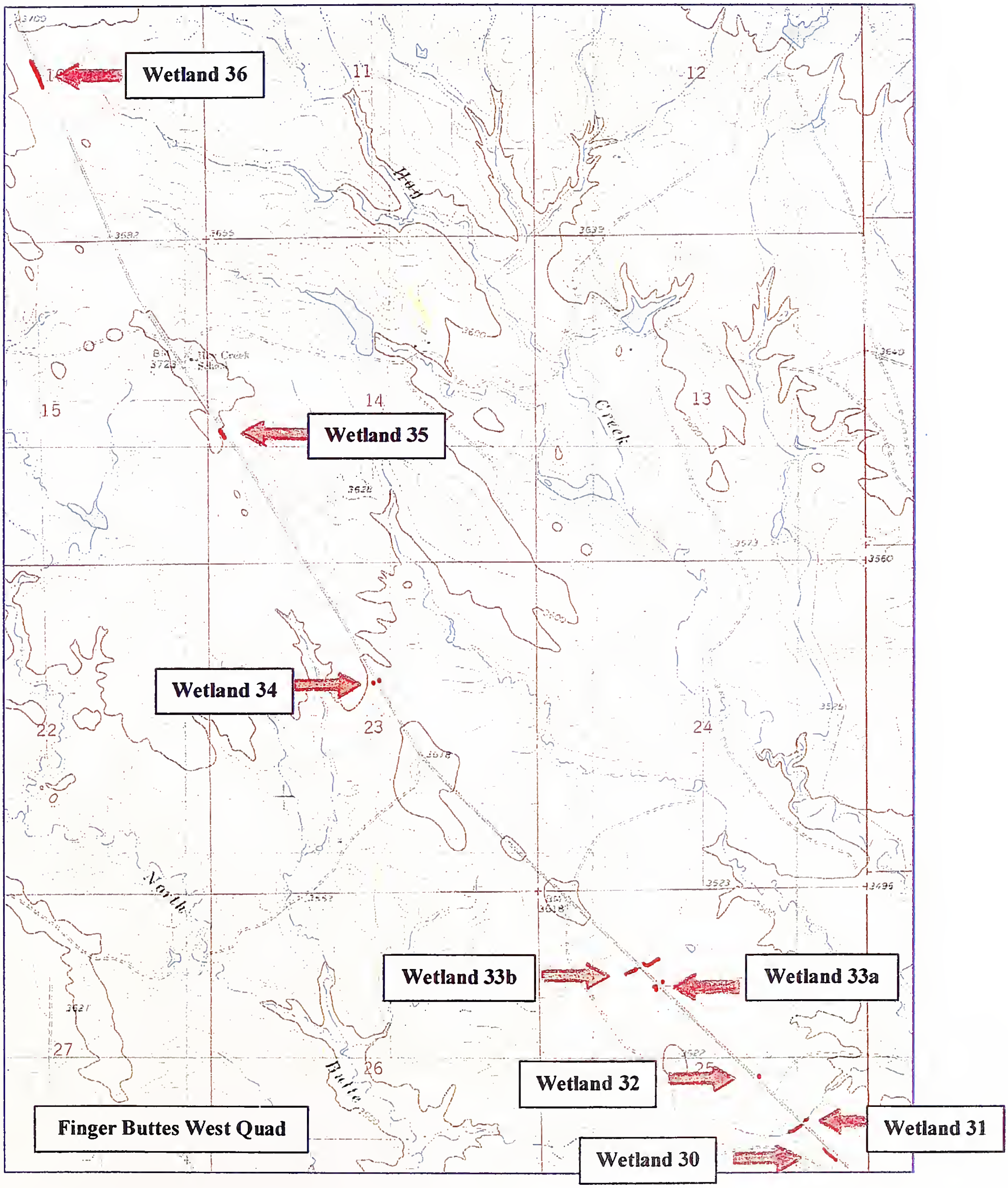


Ekalaka – Alzada Project Wetland Locations: Map Sheet 7 of 14

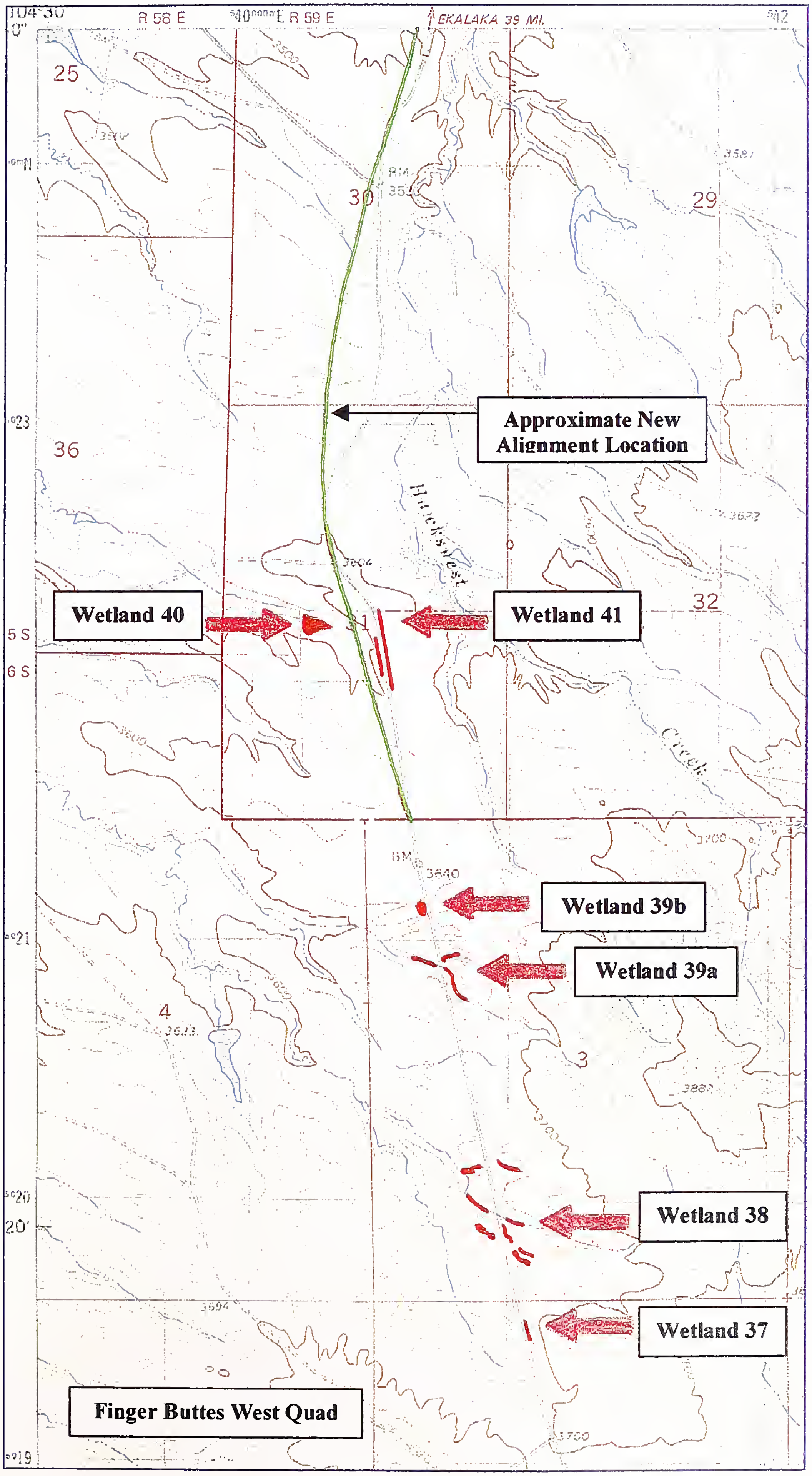




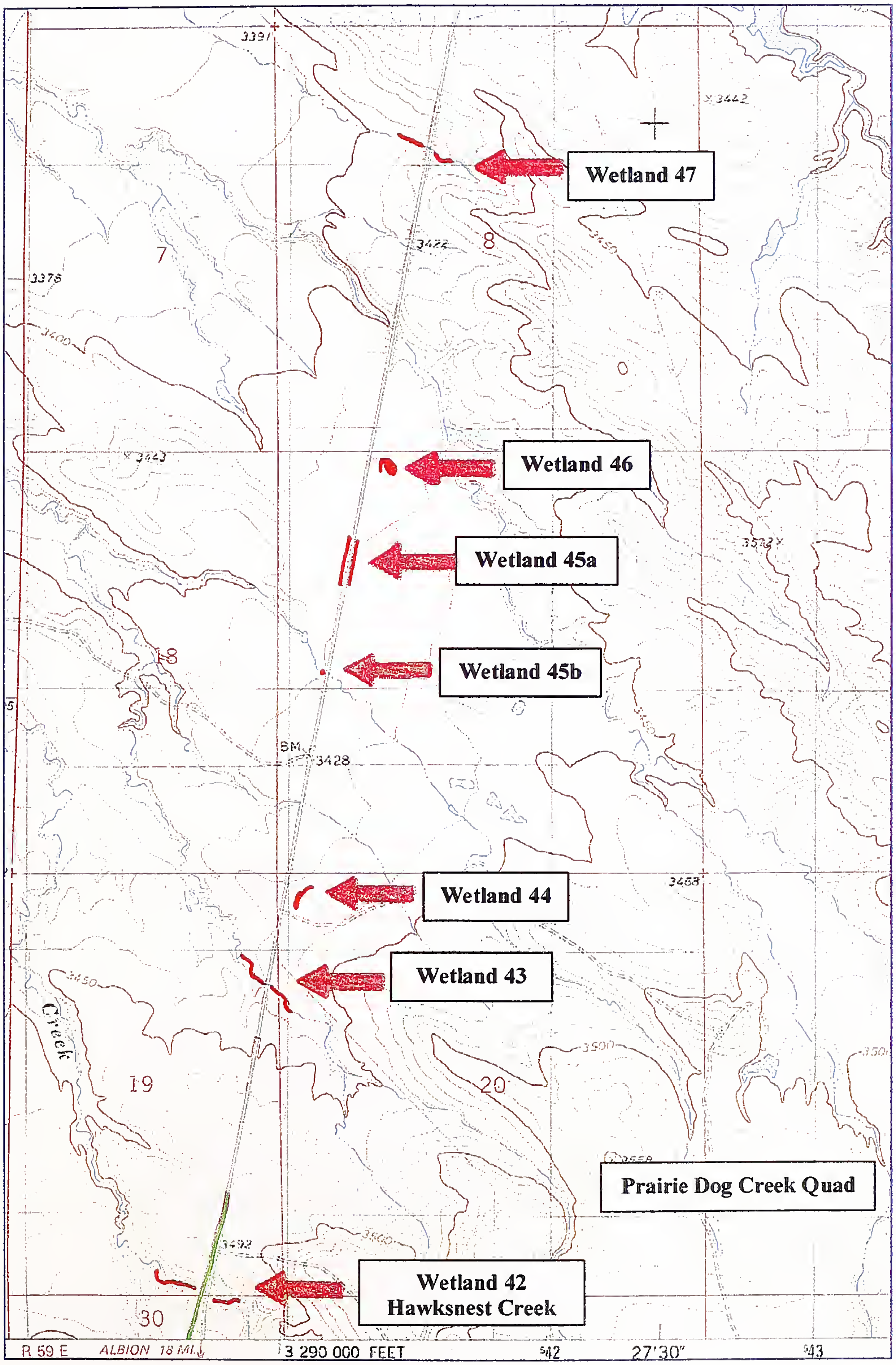
Ekalaka – Alzada Project Wetland Locations: Map Sheet 8 of 14



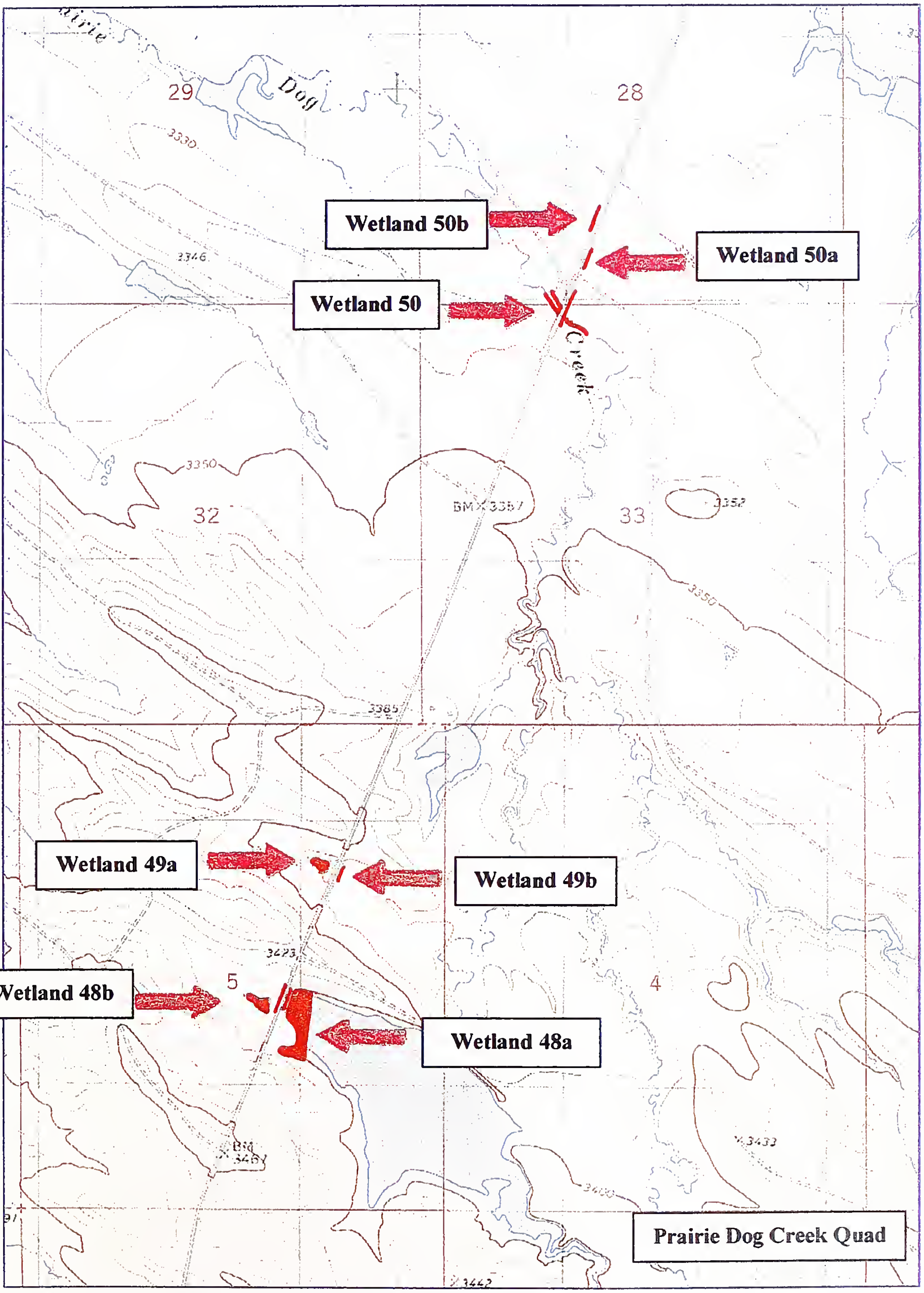
Ekalaka – Alzada Project Wetland Locations: Map Sheet 9 of 14



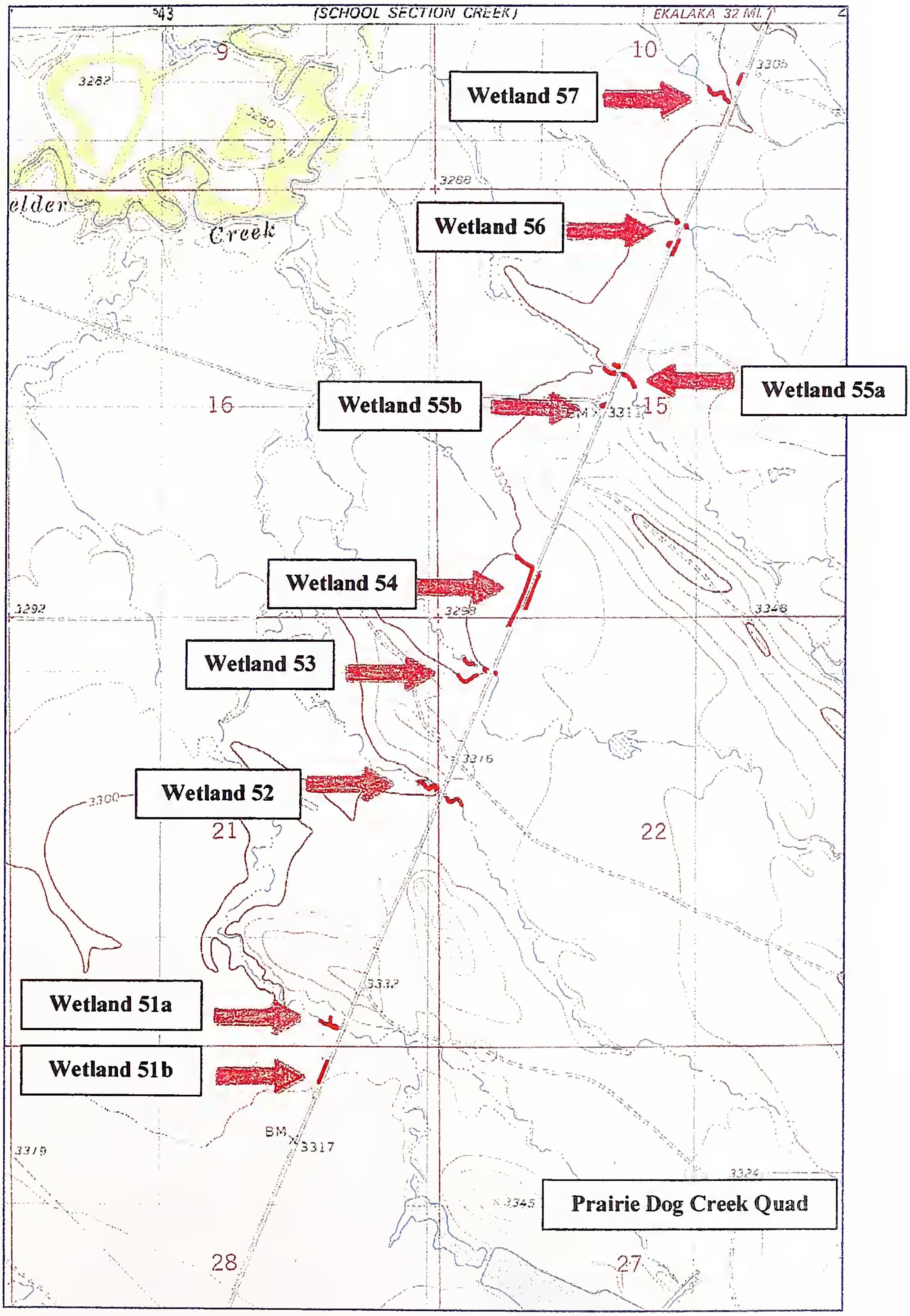
Ekalaka – Alzada Project Wetland Locations: Map Sheet 10 of 14



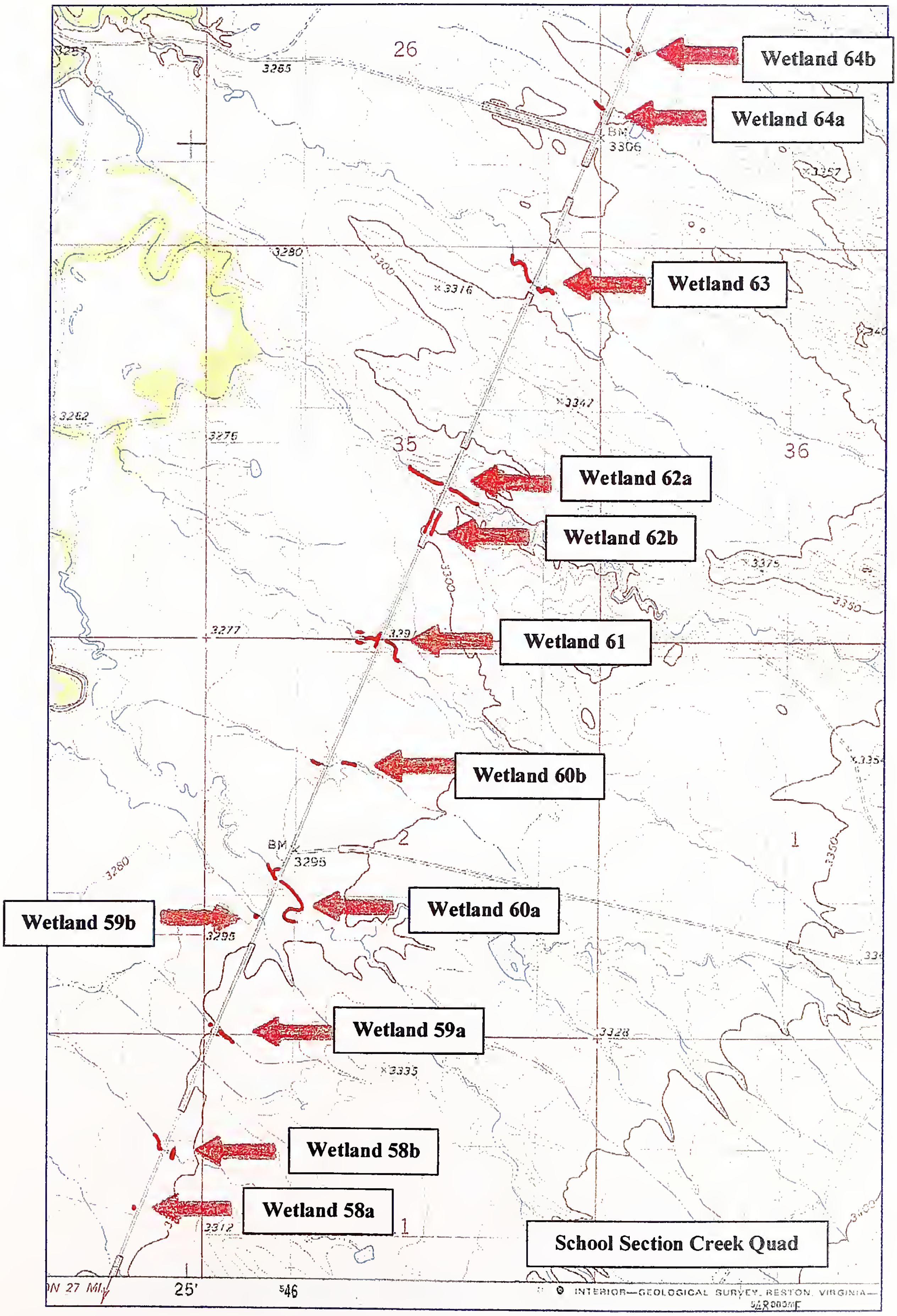
Ekalaka – Alzada Project Wetland Locations: Map Sheet 11 of 14



Ekalaka – Alzada Project Wetland Locations: Map Sheet 12 of 14



Ekalaka – Alzada Project Wetland Locations: Map Sheet 13 of 14



Ekalaka – Alzada Project Wetland Locations: Map Sheet 14 of 14